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Human persephin po
Neublastin related
WO9914235 Seq ID N
Human persephin pr
Human persephin.
Human substituted
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Human glial cell d
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                                                                                                                              2003, 22:13:29; Search time 85 Seconds (Without alignments) 179.268 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                1107863 seqs, 158726573 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                                            - protein search, using sw model
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AAY16727
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3951 Human PAP-F2ac ful 3950 Human PNP-F2ac ful 3949 Human PGP-F2ac ful	Human PAP-F2ac Human PAP-F2ac Mature mouse pe Mouse mature ne	1955 W09914235 Seq 1 Wouse persephin	0067 Mouse persephi 5663 W09914235 Seq 5681 W09914235 Seq	5721 Murine pre-pr 5680 Mature mouse	5692 WO9914235 3947 Human PNP-	5726 W09914235 35724 Rat mature	5681 Mature rat 5694 W09914235	1453 Murine n 5668 W0991423	1946 Human PGP-1	5665 Rat persep	0064 Mature mous	Nurine sub	Jubs Mature rat 5664 Rat persep	1926 Rat substit	8 6 8 8 6 8	Nurine Murine	Murine Murine	3934 Murine	0075 Perseph
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## ALIGNMENTS

RESULT 1

Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzhelmer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin. 96 AA 98WO-US19163. 97US-0931858. AAY16731 standard; Peptide; (first entry) Human persephin protein. (UNIW ) UNIV WASHINGTON WO9914235-A1 15-SEP-1998; 16-SEP-1997; 17-AUG-1999 25-MAR-1999 AAY16731; Ношо AAY1673. 

Klein R, Kotzbauer PT;

Desauvage F, Johnson EM, Lampe PA, Milbrandt JD;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzhelmer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; apinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
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                             New isolated persephin growth factor nucleic acids used to, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 96;
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; Pred. No. 5.2e-55;
0; Mismatches 0;
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                                                                        Claim 3; Page 205-206; 222pp; English.
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Best Local Similarity 100.0
Matches 96; Conservative
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                                              promote neuronal growth
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The invention relates to a novel isolated and purified growth factor (GF) that comprises persephin or a fragment or a conservatively substituted variant. The persephin GF polypeptides can promote the survival and growth of neurons and non-neuronal cells. The persephin GF polypeptides or polynucleotides can be used for preventing or treating cellular degeneration or insufficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, ischemic stroke, acute brain injury, acute spinal cord injury, nervous system tumours, multiple sclerosis, or infection, hematopoietic cell degeneration or insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or stem-cell insufficiences, cardiac muscle degeneration or insufficiency resulting from cardiomyopathy or congestive heart failure. They can also be used for treating e.g. peripheral nerve trauma or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for promoting the growth and/or differentiation of a cell in a culture condition mediated by expression of persephin by a population of cells. The products can also be used for detection and diagnosis.
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Misc-difference 1..69
/note= "optionally mutated to increase electrostatic interaction between beta hairpin structure and
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                                                                                                                                                                               New isolated persephin growth factor nucleic acids used to, e.g.
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substitutions in these residues"
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100.0%; Pred. No. 9e-55;
iive 0; Mismatches (
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mes 96; Conservative
Milbrandt JD;
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                                                                                                                                                                                                                        promote neuronal growth
                                                                      WPI; 1999-244023/20
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   Lampe PA,
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12-MAR-2002; 2002WO-EP02691.
                                                                                                                                                       28-MAR-2001; 2001US-287554P. 28-MAR-2001; 2001US-0820421.
                                                                                                                               28-FEB-2002; 2002WO-US06388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                               WPI; 2002-740922/80
                                                                                                                                                                                              (BIOJ ) BIOGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200272826-A2
                                                                             WO200278730-A2
                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-DEC-2002
                                                                                                      10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABJ15130;
                                                                                                                                                                                                                        Sah DWY;
                            human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
ABJ15130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mutants comprise at least one electrostatic charge altering mutation in a beta hairpin loop, resulting in increased bloactivity.

Mutant cystine knot growth factor (CKGF) proteins comprising one or more mutant subunits and having novel properties or improved pharmacological properties, compared to wild type CKGFs, are claimed. The CKGF superfamily comprises at least four families of growth factors: the placement of the placement of growth factors: the placement of the placement of growth factor (PDGF) family, the neurotrophins and the transforming growth factor-beta family; the families are known to be structurally similar (especially comprising the cystine knot topology) and it was shown that mutations at certain positions in the CKGF hairpin loops of family members and other members of the CKGF superfamily could significantly alter the biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mutant transforming growth factor family proteins or analogues are useful for treatment of ovulatory dysfunction, luteal phase defect, unexplained infertility, time-limited conception and in assisted reproduction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                         This is the wild type human glial cell derived factor (GDNF), persephin
                                                                          /note- "optionally mutated to increase electrostatic interaction between beta hairpin structure and
                                                                                                                                                                                                                                                                                                             New mutant cystine knot growth factor proteins comprising one or more mutant subunits, useful for treating or preventing diseases e.g. hypothyroidism and thyroid cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                        more
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 21; Length 156;
                      /label- beta_hairpin_loop_3
/note= "mutant optionally comprises one or
substitutions in these residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 529; DB 21;
100.0%; Pred. No. 9e-55;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                               Claim 609; Page 314; 320pp; English.
                                                                                                     a receptor"
a receptor
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                                                                                                                                                                                                                                   (UYMA-) UNIV MARYLAND BALTIMORE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABB82392 standard; Protein; 156
                                                                                                                                                                                                                                                           Szkudlinski MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human persephin polypeptide
                                                                                                                                                                                 99WO-US05908
                                                                                                                                                                                                         98WO-US19772
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.
Best Local Similarity 100.
Matches 96; Conservative
          28..148
                                                              Misc-difference 149..156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          activities of the CKGF.
                                                                                                                                                                                                                                                                                   WPI; 2000-283585/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        156 AA;
                                                                                                                             WO200017360-A1
                                                                                                                                                                                                                                                           Weintraub BD,
                                                                                                                                                                               19-MAR-1999;
                                                                                                                                                                                                         22-SEP-1998;
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                                                                                                                                                       30-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seguence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABB82392;
             Domain
Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to treating neuropathic pain in a subject and involves administering a formulation comprising a neublastin (NBN) polypeptide. The method is useful for treating, preventing or delaying neuropathic pain. The present sequence represents a human persephin polypeptide, a GDNF (glial cell line-derived neurotrophic factor ligand) subfamily member.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGGGRAHG
neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
1; GDNF; persephin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating neuropathic pain in a subject comprises administering a formulation comprising a neublastin polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 156;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 529; DB 23; Best Local Similarity 100.0%; Pred. No. 9e-55; Matches 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 6-7; 69pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABJ15130 standard; Protein; 156
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Sah DWY,

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The invention relates to a novel isolated and purified growth factor (GF)

that comprises persephin or a fragment or a conservatively substituted
variant. The persephin GF polypeptides can promote the survival and

cyrowth of neurons and non-neuronal cells. The persephin GF polypeptides

cyrowth of neurons and non-neuronal classes the persephin GF polypeptides

cyrowth of neurons and non-neuronal classes that the persephin GF polypeptides

cyrowth of neuropathy, anyotrophic lateral scalerosis. Alzhelmer's

degeneration or insufficiency, e.g. neuronal degeneration resulting from

cyrowth parkinson's disease, Huntington's disease, ischemic stroke,

acute brain injury, acute spinal cord injury, nervous system tumours,

cyrowth parkinson's disease, Huntington's disease, ischemic stroke,

cyrowthiple sclerosis, or infection, hematopoletic cell degeneration or

insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or

stem-cell insufficiences, cardiac muscle degeneration or insufficiency

cresulting from cardiomyopathy or congestive heart failure. They can also

condition freatholic diseases such as diabetes or renal dysfunctions

and damage caused by infectious agents. The GF can also be used for

condition mediated by expression of persephin by a population of cells.

Cyrowth and or condition and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 CQLWSLILSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system timour; infection; multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                     New isolated persephin growth factor nucleic acids used to, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95.3%; Score 504; DB 20;
100.0%; Pred. No. 4.5e-52;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66 PTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 91
                                                                                                                                               Disclosure; Page 206; 222pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY16733 standard; Peptide; 89 AA
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Best Local Similarity
Local Similarity
Local 91; Conservative
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                                                                                                 promote neuronal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a truncated neublastin polypeptide comprising an amino acid terminus that lacks one or more amino-terminal amino acids of a mature neublastin polypeptide. The polypeptides and nucleic acids are useful for treating neurodegenerative disorders such as ischemic neuronal damage, traumatic brain injury, peripheral neuropathy, neuropathic pain. Alzhelmer's disease, Huntington's disease, Parkinson's disease, amyotrophic lateral sclerosis, memory impairment, diabetes, renal diseases, or glaucoma by moderating metabolism, growth, differentiation or survival of a nerve or neuronal cell. This sequence is a neublastin related protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzheimer's disease; Parkinson's disease; Barkinson's disease; taumas brain injury; spinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                           New truncated neublastin polypeptides lacking one or more amino-terminal amino acids of a mature neublastin polypeptide useful for treating neurodegenerative disorders, e.g. peripheral neuropathy,
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                  Rossomando A;
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                                                                                                                                                                                                                                                                                                                                                 Example 4; Page 55; 138pp; English.
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                                                                                                                                                                                                                                                                                                      neuropathic pain, brain injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0931858.
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     12-MAR-2001; 2001US-0804615
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Lampe PA, Milbrandt JD;
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                                                                                                                               Johansen TE,
                                                        (BIOJ ) BIOGEN INC.
(NSGE-) NS GENE AS.
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Sequence

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Query Match

AAY16732;

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The present invention describes the use of gilal cell line-derived growth factor (GDNF) or a derivative in the manufacture of pharmaceutical compositions for epidermal and wound healing, the treatment of epidermal and stromal wound healing disorders. In particular, they are useful for treating corneal defects. Alternatives to GDNF are neurturin, persephin and artemin. The present sequence is the human persephin protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzhelmer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Use of glial cell line-derived growth factor for epidermal and stromal wound healing, and treating wound healing or scarring disorders, particularly for treating corneal defects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         93.0%; Score 492; DB 22; Length 89; 100.0%; Pred. No. 1.2e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 PTRYTDVAFLDDRHRWQRLPQLSAAACGC 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66 PTRYTDVAFLDDRHRWQRLPQLSAAACGC 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human substituted persephin polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU03924 standard; Protein; 89 AA.
                                                                                                                                                                      Disclosure; Fig 1; 60pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4; Page 45; 73pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-DEC-2000; 2000WO-US34852.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baloh RH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UNIW ) UNIV WASHINGTON.
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                        WPI; 2001-316290/33.
                                                                                                                                                                                                                                                                                                                                                                                                               89 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Milbrandt JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-DEC-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
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    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                       the invention relates to a novel isolated and purified growth factor (GF)
that comprises persephin or a fragment or a conservatively substituted
variant. The persephin GF polypeptides can promote the survival and
growth of neurons and non-neuronal cells. The persephin GF polypeptides
or polynucleotides can be used for preventing or treating cellular
degeneration or insufficiency, e.g. neuronal degeneration resulting from
peripheral neuropethy, amyotrophic lateral solerosis, Alzhelmer's
disease, Parkinson's disease, Hornington's disease, ischemic stroke,
acute brain injury, acute spinal cord injury, nervous system tumours,
multiple sclerosis, or infection, hematopoletic cell degeneration or
insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or
stem-cell insufficiences, cardiac muscle degeneration or insufficiency
resulting from cardiomyopathy or congestive heart failure. They can also
be used for treating e.g. peripheral nerve trauma or injury, exposure to
neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
and damage caused by infectious agents. The GF can also be used for
periodiug the growth and/or differentiation of a cell in a culture
medium. The antisense polynucleotides can be used for treating a disease
condition mediated by expression of persephin by a population of cells.
The products can also be used for detection and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; glial cell line-derived growth factor; GDNF; corneal defect; epidermal healing; wound healing; wound healing disorder; scarring; gene therapy; neurturin; persephin; artemin.
                                                                                                                  New isolated persephin growth factor nucleic acids used to, e.g. promote neuronal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 89;
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  Kotzbauer PT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93.0%; Score 492; DB 20;
100.0%; Pred. No. 1.2e-50;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66 PTRYTDVAFLDDRHRWQRLPQLSAAACGC
                                                                                                                                                                                  Claim 2; Page 206-207; 222pp; English.
Klein R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB60964 standard; Protein; 89 AA.
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Johnson EM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
                      Lampe PA, Milbrandt JD;
                                                                  WPI; 1999-244023/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89 AA;
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Desauvage F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
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Matches
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substituted residues in its F2a and/or F2c regions. The substitutions are substituted residues in its F2a and/or F2c regions. The substitutions are from the F2a and F2c regions of the proteins GDNF, neutrurin and artemin, from the F2a and F2c regions of the proteins GDNF, neutrurin and artemin, from the F2a and F2c regions of protein cativates the growth cacher alphal-RET protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET. The growth factors and nucleic acids encoding them are useful for providing crophic support to a mammalian cell and/or for producing differentiation of a mammalian cell, in a patient suffering from peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntingfon's disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or enterior diseases such as idiopathic constipation. The sequences are also useful for proventing or treating cellular degeneration or insufficiency consecution in an individual, suffering from ecsinopaenia, basopaenia, lymphopaenia, cancellus degeneration, or congestive heart failure. The growth factors are also useful for promoting the survival of peripheral and central neuronal populations in vivo or in vitro. persephin protein, which can have 

89 AA; Sequence

ö Gaps ö 93.0%; Score 492; DB 22; Length 89; 100.0%; Pred. No. 1.2e-50; Indels ive 0; Mismatches 0; Indels 89; Conservative Similarity Query Match Best Local 9 Matches q ô a ò

Human PAP-F2ac full-length polypeptide. AAU03951 standard; Protein; 96 AA. 23-OCT-2001 (first entry) AAU03951; RESULT 10 AAU03951 

Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia; mutant; mutein.

Chimeric - Homo sapiens.

82..88 /note= "Human artemin F2c region" /note= "Human artemin F2a region" Location/Qualifiers Key Region Region 

WO200147946-A2

05-JUL-2001

21-DEC-2000; 2000WO-US34852.

990S-0473551 28-DEC-1999;

(UNIW ) UNIV WASHINGTON.

Baloh RH; Milbrandt JD,

WPI; 2001-425618/45.

New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -

Claim 8; Page 48; 73pp; English.

The sequence represents a human persephin full-length protein, whereby the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of artemin protein. Persephin can have substitutions from the F2a and F2c actions of the protein confer, neurturin and artemin, from the F2a and F2c regions of the protein extivates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not substantially activate GFRAlphal-RET or GFRAlphal-RET), but does not call and/or for producing differentiation of a mammallan cell, in a patient suffering from peripheral neuropathy, amyotrophic colisease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute sphan cord injury, multiple sclerosis, nervous system tumours (e.g. neurophastomas), or enteric diseases such as idiopathic constipation. The sequences are also useful for preventing or treating from eosinopaenia, basopaenia, lymphopaenia, monocytopaenia, congestive heart failure. The growth factors are also useful for congestive heart failure. The growth factors are also useful for congestive heart failure. The growth factors are also useful for the promoting in the promoting recome congestive heart failure. The growth factors are also useful for the congestive heart failure. The growth factors are also useful for the congestive heart failure. The growth factors are also useful for growth growth factors are also useful for growth growth growth growth growth growth gr vivo or in vitro

96 AA; Sequence

ö 22; Length 96; 4; Indels 92.6%; Score 490; DB 22; 92.7%; Pred. No. 2.2e-50; iive 3; Mismatches 4 Query Match
Best Local Similarity 92...,
Best Local Similarity 92...,
Best Local Similarity

61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96 à

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g

AAU03950

AAU03950;

AAU03950 standard; Protein; 97 AA

Human PNP-F2ac full-length polypeptide.

23-OCT-2001 (first entry)

persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET, trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzhaimer's disease; Parkinson's disease; Huntington's disease; adiabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastoma; enteric disease; idiopathic constibation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia; mutant; mutein.

Chimeric - Homo sapiens

Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral scherosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastome; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;

Chimeric - Homo sapiens.

mutant; mutein.

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The sequence represents a human persephin full-length protein, whereby
the F2a and F2c regions have amino acid substitutions from the F2a and
F2c regions of the protein. Persephin can have substitutions from
the F2a and F2c regions of the proteins GDNF, neurturin and artemin, from
the F2a and F2c regions of the proteins GDNF, neurturin and artemin, from
thumans, mice or rate. This type of protein activates the growth factor
chumans, mice or rate. This type of protein activates the growth factor
creeptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not
substantially activate GRRalphal-RET or GRRalphal-RET), but does not
and nucleic acids encoding them are useful for providing trophic support
to a mammalian cell and/or for producing differentiation of a mammalian
cell, in a patient suffering from peripheral neuropathy, amyortophic
lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's
disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic
stroke, acute brain injury, acute spinal cord injury, multiple sclerosis,
nervous system tumours (e.g. neuroblastomas), or enteric diseases such as
idiopathic constipation. The sequences are also useful for preventing or
treating cellular degeneration or insufficiency in an individual,
culticopathic constipation. Basopaenia, lymphopaenia, monocytopaenia,
neutropaenia, anaemia, thrombocytopaenia, cardiac muscle degeneration, or
congestive heart failure. The growth factors are also useful for
congestive heart failure in greitheral and central neuronal populations in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -
                    68..72
/note= "Human neurturin F2a region"
/note= "Human neurturin F2c region"
                                                                                              "Human neurturin F2c region"
Location/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 8; Page 48; 73pp; English.
                                                                                                                                                                                                                                          21-DEC-2000; 2000WO-US34852
                                                                                                                                                                                                                                                                                            99US-0473551
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                                                                                                                                              WO200147946-A2
                                                                                                                                                                                                                                                                                            28-DEC-1999;
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Key
Region
                                                                         Region
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                   Gaps
                                                   1;
                        89.1%; Score 471.5; DB 22; Length 97; 90.7%; Pred. No. 3.5e-48;
                                                   5; Indels
                                                                                                                                                        97
                                                                                                                               61 GPCCRPTRYTD-VAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                              3; Mismatches
                                  Best Local Similarity 90.7 Matches 88; Conservative
97 AA;
 Sequence
                         Query Match
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Human PGP-F2ac full-length polypeptide.

.23-OCT-2001 (first entry)

AAU03949;

AAU03949 standard; Protein; 97 AA.

RESULT 12 AAU03949

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The sequence represents a human persephin full-length protein, whereby
the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of the protein ear have substitutions from the F2a and F3c regions of the proteins GDNF, neurturin and artemin, from humans, mice or rats. This type of protein activates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not and nucleic acids encoding them are useful for providing trophic support to a mammalian cell and/or for producing differentiation of a mammalian cell and/or for producing differentiation of a mammalian cell, and/or for producing differentiations of alsease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple sclerosis, nervoes system tumours (e.g. neuroblastomas), or enteric diseases such as diapating constipation. The sequences are also useful for preventing or treating cellular degeneration or insufficiency in an individual, caufficenting the answemia, thrombocytopaenia, lymphopaenia, monocytopaenia, neutropaenia, anaemia, thrombocytopaenia, cardiac muscle degeneration, or congestive heart failure. The growth factors are also useful for and active the growth factors are also useful for and active the growth factors are also useful for and active the growth factors are also useful for and active the growth factors are also useful for and active the growth active theorem and contrains and contrains in an active the growth and contrains and central neuronal populations in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -
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                                                                                                                                                                                                                                                                                                                                                          "Human GDNF F2a region"
                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Human GDNF F2c region"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 48; 73pp; English.
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                                                                                                                                                                                                                                                                                                                                         68..72
/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200147946-A2
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요
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Gaps

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Length 89; Indels

DB 22;

Score 453; DB 22; Pred. No. 5.1e-46; 3; Mismatches 4

85.6%; 92.1%;

82; Conservative

Similarity

Query Match Best Local S

Matches

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89 AA;

Sequence

X C

94

Ä

AAW30066 standard; Protein; 96

AAW30066

(first entry)

27-MAR-1998

AAW30066;

Mature mouse persephin.

PTRYTDVAFLDDRHRWQRLPQLSAAACGC

99

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Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; neuroblastoma; enteric disease; idlopathot constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -
                                                                                                                                                                                                                                                                                                                                                                                                                                            63..67
/note= "Human artemin F2a region"
77..83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Human artemin F2c region"
61 GPCCRPTAFDDDVAFLDDRHRYHILRKHSAAACGCGG 97
                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                AAU03948 standard; Protein; 89 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-DEC-2000; 2000WO-US34852.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      990S-0473551
                                                                                                                                                                                Human PAP-F2ac polypeptide
                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Baloh RH;
                                                                                                                                                                                                                                                                                                                                                                                              Chimeric - Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-425618/45.
                                                                                                                                                                                                                                                                                                                                                               mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-DEC-1999;
                                                                                                                                                 23-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2001
                                                                                                                  AAU03948;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Region
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neuronal degeneration, haematopoietic cell degeneration; cardiac muscle degeneration; amyotrophic lateral sclerosis; neuropathy; Alzheimer's disease; Parkinson's disease; stroke; Huntington's disease; nervous system tumour; multiple sclerosis; eosinopenia; basopenia; lymphopenia; monocytopenia; neutropenia; anaemia; thrombocytopenia; stem cell insufficiency; cardlomyopathy; congestive heart failure; therapy; mouse.
                                                                             Persephin; neurturin; glial-derived neurotrophic factor; GDNF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Milbrandt JD;
                                                                                                                                                                                                                                                                                                                                                                                           'note= "O-glycosylated"
                                                                                                                                                                                                                                                                                                                                                                                                               /note= "O-glycosylated"
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                                                                                                                                                                                                                                                             note- "O-glycosylated"
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                                                                                                                                                                                                                    'note= "O-glycosylated"
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                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US03461.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kotzbauer PT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UNIW ) UNIV WASHINGTON.
                                                                                                                                                                                                                                                                                                                              note=
                                                                                                                                                                                                                                                                                                                                                                        'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1997-470818/43.
                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference 73
                                                                                                                                                                                                                                                                                                                                                            Misc-difference 68
                                                                                                                                                                                                                                                                                              Misc-difference 43
                                                                                                                                                                                                                                                                                                                  Misc-difference 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAT90761
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                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9733911-A1
                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-SEP-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Johnson EM,
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The sequence represents a human persephin protein, whereby the F2a and F2c regions dartemin protein. Persephin can have substitutions from the F2a and F2c regions of artemin protein. Persephin can have substitutions from the F2a and F2c regions of the proteins GDNF, neurturin and artemin, from humans, mice or rats. This type of protein activates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalpha-RET), but does not substantially activate GFRalpha-RET), but does not and nucleic acids encoding them are useful for providing trophic support to a mammalian call and/or for producing differentiation of a mammalian coll and/or for producing differentiation of a mammalian call and/or for producing differentiation of a mammalian call in a patient suffering from peripheral neuropathy, amyotrophic support of lateral sclerosis, alsease, parkinson's disease, Huntington's disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple sclerosis, contropantic constipation. The sequences are also useful for preventing or treating from eosinopaenia, basopaenia, lymphopeania, monocytopaenia, congestive heart failure. The growth factors are also useful for promoting in the promoting the peripheral and central neuronal populations in promoting the parvival of peripheral and central neuronal populations in

vivo or in vitro

Claim 7; Page 48; 73pp; English.

WPI; 1999-244023/20

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Search completed: September 9, 2003, 22:22:28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                   factor and member of the gilal-derived neurotrophic factor.

C factor and member of the gilal-derived neurotrophic factor.

C neurturin family. Recombinant mature persephin can be expressed.

C in host cells utilising an isolated nucleic acid sequence (see

AAT90761). Persephin polypeptides, and DNA sequences encoding them,

can be used in claimed methods to prevent or treat cellular

degeneration or insufficiency, such as neuronal degeneration

resulting from peripheral neuropathy, amyotrophic lateral

sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's

clisease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

alsease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

alsease, ischaemic stroke, acute brain or spinal cord injury,

clisease, ischaemic stroke, acute brain or spinal cord injury,

alsease, ischaemic stroke, acute brain or insufficiency resulting from

eosinopenia, basopenia, lymphopenia, monocytopenia, neutropenia,

anaemia, thrombocytopenia or stem-cell insufficiency arising

from cardiomyopathy or congestive heart failure. Persephin can be

added to a cell culture medium to promote growth and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzhalmer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; apinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
               GDNF-neurturin family related growth factor, Persephin - used to prevent or treat cellular, neuronal or non-neuronal, degeneration or insufficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             persephin; neuron growth; cellular degeneration;
                                                                                                                         This polypeptide comprises mature mouse persephin, a novel growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 96;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 83.0%; Score 439; DB 18; Best Local Similarity 81.2%; Pred. No. 2.5e-44; Matches 78; Conservative 8; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klein R,
                                                                                        Claim 3; Page 151; 228pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY16723 standard; Peptide; 96 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse mature persephin protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US19163
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       differentiation.
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                                                                                                                                                                                  The invention relates to a novel isolated and purified growth factor (GF) variant. The persephin or a fragment or a conservatively substituted variant. The persephin of Polypeptides can promote the survival and growth of neurons and non-neuronal cells. The persephin GF polypeptides or polynucleotides can be used for preventing or treating cellular peripheral or insufficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral sclerois, Alzhelmer's disease, Parkinson's disease, Huntington's disease, ischemic stroke, multiple sclerois, or infection, hematopoletic cell degeneration or insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or stem-cell insufficiences, cardiac muscle degeneration or insufficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             resulting from cardiomyopathy or congestive heart failure. They can also be used for treating e.g. peripheral nerve trauma or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for promoting the growth and/or differentiation of a cell in a culture madium. The antisense polynucleotides can be used for treating a disease condition mediated by expression of persephin by a population of cells. The products can also be used for detection and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
New isolated persephin growth factor nucleic acids used to, e.g. promote neuronal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 439; DB 20; Length 96;
Pred. No. 2.5e-44;
8; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                    Claim 3; Page 193; 222pp; English
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81.2%;
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Best Local Similarity 81.2
Matches 78; Conservative
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GenCore version 5.1.6
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- protein search, using sw model OM protein 9, 2003, 22:20:14 September Run on:

4 ; Search time 40 Seconds (without alignments) 230.805 Million cell updates/sec

US-09-474-980B-221 529

1 ALSGPCQLWSLTLSVAELGL.....DRHRWQRLPQLSAAACGCGG 96 Perfect score: Sequence:

Scoring table:

283308 seqs, 96168682 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Searched:

al number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Maximum Match 100% Listing first 45 summaries Post-processing: Minimum Match 08 Maximum Match 101

PIR\_76:\* Database

1: plr1:\* 2: plr2:\* 3: plr3:\* 4: plr4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

hypothetical prote glial cell line-de glial cell line-de glial cell line-de mullerian inhibiti mullerian inhibiti mullerian inhibiti mullerian inhibiti activin beta B-z anti-mullerian hor inhibin beta B-z anti-mullerian hor inhibin beta-B cha betaB inhibin prec activin beta B sub vgr protein - rat Vg-1-related prote bone morphogenetic transforming growt TGF-beta-related p transforming growt SPDVR1 protein Description SUMMARIES A37499 B37499 S20100 WFBOM T11753 WFHUM PW0042 PN0506 150103 JC5119 B41398 JC2466 PN0505 WFPGBB A40150 S50899 I51199 S37618 A54798 A34939 148235 A43918 Query Match Length 352 1115 349 407 408 370 219.5 173 172 169 110.5 108.5 108.5 104.5 83.5 83.5 83.5 81.5 81.5 80.5 80.5 80.5 79.5 Score 78.5 Result No. 

transforming growt bone morphogenetic	growth/differentia decapentaplegic pr	bone morphogenetic activin beta C - m	activin beta C pre	placental transfor	transforming growt	activin beta E cha	bone morphogenetic	bone morphogenetic	probable two compo	bone morphogenetic	bone morphogenetic	osteogenic protein
S01825 JC4646	S45284 A26158	JC4838 JC5366	S70580	JC5697	A55706	JC5241	I49542	BMHU5	T35524	I51284	JH0690	JQ1184
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14.1	14.0 14.0	13.9 13.8	13.8	13.7	13.7	13.6	13.6	13.6	13.5	13.4	13.4	13.4
74.5	4 4	73.5	73	72.5	72.5	72	72	72	71.5	71	71	71
30	337	34 35	36	37	38	38	40	41	42	43	44	45

## ALIGNMENTS

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Hypothetical protein DKF2p762B0211.1 - human
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Saccession: T47159
R;Blum, H.; Bauersachs, S.; Mewes, H.W.; Weil, B.; Wiemann, S.
Submitted to the Protein Sequence Database, March 2000
A;Reference number: 224379
A;Reference number: 224379
A;Reference protein T47159
A;Status: preliminary
A;Molecule type: man
A;References: EMBL:AL161995
                                                                                                                                                                                                                                                                                                                                          A; Experimental source: adult melanoma (MeWo cell line); clone DKFZp762B0211 C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 219.5; DB 2;
Pred. No. 6.9e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   41.5%;
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Best Local Similarity
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7; Сарэ	GOGRA	RRERV					ct-19
7;		: Rorrr					o-80 e
Indels	DHGLALARIK	- YDLGLRRL		vo			ext_change
30;	RGART	AARV	3C 94	4C 19		e e	36 #t
Mismatches	KVIFRYCAGSCPI	:           :   FVLFRYCAGACE	WORLPOLSAAACC	HTVHELSAREC		factor - mous	) on 02-Aug-199
12;	SYASEE	SYASDE	LDDRHR	LDAHSR		ophic	mouse revisi
47; Conservative 12; Mismatches 30; Indels	5 PCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAH 59	102 PCGLRELEVRVSELGLGYASDETVLFRYCAGACEAAARV-YDLGLRRLRQRRRLRRERVR 160	60 GGPCCRPTRYTD-VAFLDDRHRWQRLPQLSAAACGC 94	161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECAC 196		glial cell line-derived neuotrophic factor - mouse	C.Species: mus muscuius (incuse mouse) C.Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 08-Oct-1999
47;	R M	102 PC	90 00	161 AC		line	-Aug-
Matches	ογ	ąg	Qy	qq	RESULT 2 I49686	glial cell	C; Date: 02

Cydrocassion: 149686; JC6518
R;Watabe, K.; Fukuda, T.; Tanaka, J.; Honda, H.; Toyohara, K.; Sakai, O.
J. Neurosci. Res. 41, 279-290, 1995
A;Title: Spontaneously immortalized adult mouse Schwann cells secrete autocrine and p A;Reference number: 149686; MUID:95379105; PMID:7650763
A;Accession: 149686
A;Status: preliminary: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-211 <RES>
A;Residues: 1-211 <RES>
A;Cossion: 1496860.1; PID:378584; PIDN:BAA08660.1; PID:9758585
B;Matsushita, N.; Fujita, Y.; Tanaka, M.; Nogatsu, T.; Kluchi, K.
Gene 203, 149-157, 1997
A;Title: Cloning and structural organization of the gene encoding the mouse glial cel A;Reference number: JC6518; MUID:98086214; PMID:9426245
A;Status: preliminary

transforming growt

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A; Molecule type: DNA
A; Residues; 1-211 < LINN
A; Ross-references: GB:L19063; GB:L15306; NID:g306761; PIDN:AAA67910.1; PID:g306763
A; Note: sequence extracted from NCBI backbone (NCBIE:132084)
C; Reywords: glycoprotein; homodimer
F; 1-197Domain: signal sequence * status predicted < SIG>
F; 20-777Domain: propeptide * status predicted < NRO>
F; 78-211/Product: glial cell line-derived neurobrophic factor * status predicted < NAT>
F; 126,162/Binding site: carbohydrate (Asn) (covalent) * status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: $20100; $51159
R;Muensterberg, A.; Lovell-Badge, R.
Development 113, 613-624, 1991
A;Title: Expression of the mouse anti-Muellerian hormone gene suggests a role in both A;Reference number: $20100; MUID:92146272; PMID:1782869
A;Accession: $20100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Homo sapiens (man)
C;Date: 26-Aug-1999 #sequence_revision 26-Aug-1999 #text_change 26-Aug-1999
C;Accession: 337499
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergi A; Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: B37499
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A; Residues: 1-555 <MUE>
A; Residues: 1-555 <MUE>
A; Cross references: EMBL: X63240; NID: 949945; PIDN: CAA44912.1; PID: 949946
A; Cross references: EMBL: X63240; NID: 949945; PIDN: CAA44912.1; PID: 949946
B; Dresser, D.W.; Hacker, A.; Lovell-Badge, R.; Guerrier, D.
Submitted to the EMBL Data Library, January 1995
A; Description: The genes for anti-Muellerian hormone (AMH) and a spliceosome protein A; Reference number: S51159
A; Status: preliminary
                                                                                                   C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 01-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR----AHGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   glial cell line-derived neurotrophic factor precursor - human
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                                                                                                                                                                                                                                          62 PCCRPTRY-TDVAFLDDRHRWQRLPQLSAAACGC
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A; Residues: 1-41 <DRE>
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A/Status: translated from GB/EMBL/DDBJ
A/Status: 1-24, A/, 52-76 <SUT>
A/Status: translated from GB/EMBL/SDBJ
A/Status: strain wistar; kidney
C/Genetics:
A/Status for glal cell line-derived neurotrophic factor splice form GB/EFS1-211/Product: glial cell line-derived neurotrophic factor splice form GB/EFS1-24, A/, 52-211/Product: glial cell line-derived neurotrophic factor splice form GB/EFS1-20-77/Domain: spropeptide #status predicted <SIG>
F/SO-77/Domain: propeptide #status predicted <SIG>
F/SO-77/Domain: propeptide #status predicted <ARO>
F/SO-77/Domain: propeptide #status for factor #status experimental <AMAT>
F/SO-77/Domain: glial cell line-derived neurotrophic factor #status experimental <AMAT>
F/SO-87/Domain: glial cell line-derived neurotrophic factor #status experimental <AMAT>
F/SO-87/Domain: glial cell line-derived neurotrophic factor #status experimental <AMAT>
F/SO-87/Domain: glial cell line-derived neurotrophic factor #status experimental <AMAT>
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A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-76.%2,78-899.%,91-211 <SPR2>
A;Residues: 1-76.%2,78-899.%
A;Residues: 1-76.%2,78-899.%
A;Residues: sistemees: GB:S15583; NID:g912788; PIDN:AAB33891.1; PID:g912789
perimental source: strain uncertain; splice form GDNF633
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Neuroreport S., 2486-2488, 1994
A;Title: GDNF is expressed in two forms in many tissues outside the CNS.
A;Reference number: 158180; MUID:95210610; PMID:7696586
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                                                                                                                                      Query Match 32.7%; Score 173; DB 2; Length 21 Best Local Similarity 41.5%; Pred. No. 1e-11; Matches 39; Conservative 15; Mismatches 34; Indels
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41.5%; Pred. No. 1.3e-11;
tive 15; Mismatches 34;
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A; Molecule type: nucleic acid A; Residues: 1-211 <MAT>
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19

Gaps

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September 9, 2003, 22:14:04; Search time 23 Seconds (without alignments) 196.285 Million cell updates/sec
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                               OM protein - protein search, using sw model
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US-09-474-980B-221 529 1 ALSGPCQLWSLTLSVAELGL......DRHRWQRLPQLSAAACGCGG 96 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 127863 seqs, 47026705 residues Searched:

al number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_41:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	060542 homo saplen 070300 mus musculu 070300 mus musculu 07031 rattus norv 099748 homo saplen P87463 mus musculu 040731 rattus norv P39905 homo saplen P79295 sus scrofa P79295 sus scrofa P79295 sus scrofa P79295 sus scrofa P79295 mus musculu 092016 rattus norv 092016 rattus norv 092016 rattus norv 092016 rattus norv 092019 mus musculu 095101 homo saplen 095103 homo saplen 04222 brachydanio P65103 homo saplen 040222 brachydanio P65103 homo saplen 04222 musculu 04222 musculu 04222 mus scrofa 014793 homo saplen 04221 meleagris g 04221 meleagris g 04221 meleagris g 04221 rattus norv P27093 gallus gall 09888 mus musculu 04221 rattus norv P27093 gallus gall
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IHBB_BOVIN BMP6_RAT GA_DROVI BMP6_MOUSE BMP6_HUMAN TGF3_CHICK TGF3_CHICK TGF3_CHICK TGF3_CHICK TGF3_CHICK TGF3_CHICK TGF3_CHICK TGF3_HUMAN
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## ALIGNMENTS

D; PRT; 156 AA. Created) Last sequence update) Last annotation update) SP).	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.  WCBL_TaxID=9606;  [1]  SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MIDDIADAGE J. de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,  Tansay M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,  Tansay M.G., Lampe P.A., Heuckeroth R.O., Wolsada R., Kato A.C.,  Hynes M., Sherman D., Nishimura M., Wang LC., Vandlen R., Moffat B.,  Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,  Phillips H.S., Johnson E.M.;  Phillips H.S., Johnson E.M.;  Neuron 20:245-253(1998).  DOPAMINERIC AND MOTOR NEURODRIC ACTIVITY ON MESENCEPHALIC  DOPAMINERIC AND MOTOR NEURONS.	1- SUBCELLULAR LOCATION: Secreted. 1- SUBCELLULAR LOCATION: Secreted. 1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.  This SWISS-PROT entry is copyright, it is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Gsage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).	nervous system development; TaS. sknot.  1; FALSE_NEG. POTENTIAL. PERSEPHIN. BY SIMILARITY. BY SIMILARITY. BY SIMILARITY.
STANDARD; (Rel. 39, Creat (Rel. 39, Last (Rel. 40, Last ecursor (PSP).	sapiens (Human).  ryota; Metazoa; Chordata; Crani alla; Eutheria; Primates; Catar —TaxID=9606;  INN=98150950; Pubmed-9491986;  randt J., de Sauvage F.J., Fahr ey M.G., Lampe P.A., Heuckeroth urger K.S., Golden J.P., Davies s M., Sherman D., Nishimura M., Inps H.S., Johnson E.M.; Ilps H.S., Johnson E.M.; sephin, a novel neurotrophic fa turin."; solin, ". FUNCTION: EXHIBITS NEUROTROPHIC	SUBCELLUIAN LOCATION: Secreted. SIMILARITY: BELONGS TO THE TGF. SWISS-PROT entry is copyright. een the Swiss Institute of Bio European Bioinformatics Institut by non-profit institutions a fied and this statement is not ties requires a license agreement end an email to license@isb-sib	L; AF040962; AAC39640.1;
1 UMAN SPN_HUMAN 60542; 0-MAY-2000 6-OCT-2001 ersephin pr	Eukaryota; Metazoa; Chordata; Cra Mammalla; Eutheria; Primates; Cat NCBL_TAXID=9606; [1] SEQUENCE FROM N.A. MEDLINE-98150950; Pubmed=9491986; Milbrandt J., de Sauvage F.J., Fa Tansey M.G., Lampe P.A., Heuckero Simburger K.S., Golden J.P., Davi Hynes M., Sherman D., Nishimura M. Klein R.D., Poulsen K., Gray C., Phillips H.S., Johnson E.M.; "Persephin, a novel neurotrophic neurturin."; Persephin, a novel neurotrophic neuron 20:245-253(1998).		EMBL; AF040962; AAC39640.1; HSSP; Q07731; 1AG0-Genew; HGNC:9579; PSPN.  MIM; 662921; G0; G0:0007417; P:central nervinterPro; IPRO02400; GF_CYSKNO InterPro; IPRO0139; TGFb.  Ffam; PRO019; TGF-beta; I.  PRINTS; PRO0438; GFCYSKNOT.  SNART; SM0204; TGFB; 1.  PRINTS; PRO0438; GFCYSKNOT.  SNART; SM0204; TGFB; 1.  PRINTS; PRO0438; GFCYSKNOT.  SNART; AM0204; TGFB; 1.  PROSITE; PS00250; TGF_BETA_1; 3  GCOWth factor; Signal.  SIGNAL  SIGNAL  1 21 PP  CHAIN  DISULFID 66 124 B  DISULFID 93 152 B  DISULFID 97 154
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                                                                                                  61 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGGGRAHG 120
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MEDLINE-98150950; PubMed-9491986;
Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
Phillips H.S., Johnson E.M.,
Persephin, a novel neurotrophic factor related to GDNF and
neurturin.";
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus
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--- SUBUNIT: Homodimer; disulfide-linked (By similarity).
--- SUBCELLULAR LOCATION: Secreted.
--- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neuron 20:245-253(1998).
                                      Length 156;
                                                            Indels
INTERCHAIN (BY SIMILARITY).
6547751653A7044A CRC64;
                                                                                                                                  ö
                                 Query Match
Best Local Similarity 100.0%; Score 529; DB 1;
Best Local Similarity 100.0%; Pred. No. 7.5e.53;
Matches 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP; Q07731; 1AGQ.
MGD; MGI:1201684; Pspn.
GO; GO:0005615; C:extracellular space; IDA.
GO; GO:0001658; P:ureteric bud branching; IDA.
                                                                                                                                                                                                                                             30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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PRINTS; PR00438; GFCXSKNOT.
SMRRT; SM00204; TGFB, 1.
PROSTIE; PS00250; TGF_BETA_1; FALSE_NEG.
Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR002400; GF_cysknot.
InterPro; IPR001839; TGFb.
123 II
16600 MW;
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                                                                                                                                                                                                                                                                                 Persephin precursor (PSP).
                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
123 1
156 AA;
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
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DISULFID
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                                                                                                                                             ö
                                                                                                                                                                                                                                1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-98150956; PubMed-9491986;
Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
Phillips H.S., Johnson E.M.,
Persephin, a novel neurotrophic factor related to GDNF and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-78 FROM N.A.
STRAIN-Sprague-Dawley; TISSUE-Pons;
MEDLINE-98374044; PubMed-9710270;
Jaszal J., Farkas L.M., Galter D., Reuss B., Strelau J., Unsicker K.,
Kriegistein K.;
                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentía; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "GDNF-related factor persephin is widely distributed throughout the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nervous system.";
J. Neurosci. Res. 53:494-501(1998).
-!- FUNCTION: EXHIBITS NEUROTROPHIC ACTIVITY ON MESENCEPHALIC
                                                                                     DB 1; Length 156;
                                                                                                                                          10; Indels
     INTERCHAIN (BY SIMILARITY). 7DC6DD98132E041B CRC64;
                                                                                                                                                                                                                                                                                                                                   61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                           Score 439; Db 1,
No. 1.1e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                    Pred. No. 1.1e-8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00019; TGF_beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM00204; TGFB; 1.
PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AJ005169; CAA06410.1; -. HSSP; 007731; 1AG0. InterPro; IPR002400; GF_cysknot. InterPro; IPR001839; TGFb.
123 IN
17030 MW;
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                                                                                     83.0%;
81.2%;
                                                     Persephin precursor (PSP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
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POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                          22405 MW;
                                                       EMBL; U78110; AACS0898.1; -. EMBL; ALG1995; CAA82327.1; PIR; T47159, T47159, T47159, Genew, HGNP; NOO7731; 1AGO.
                                                                                                                                                                                                                                                                                                                                                                                                          Best_Local Similarity 49.0%
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
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1194
1194
1196
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                                                                                                                                                                                                                                                                                                                                                                        197 AA;
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                                                                                                                MIM; 602018; -
                                                                                                                                                                                                                                 Polymorphism
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DISULFID
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VARIANT
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                                                                                                                                                            1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1- SUBGULIAR LOCATION: Secreted.
-1- SUBGELLULAR LOCATION: Secreted.
-1- DISEASE: IN ASSOCIATION WITH MUTATIONS OF RET GENE AND POSSIBLY OTHER LOCI, IT IS INVOLVED IN HIRSCHEPRUNG'S DISEASE (HSCR). THIS GENETIC DISORDER OF NUTRAL CANGLION CELLS IN THE HINDGUT; OFTEN THE ABSENCE OF INTRAMURAL GANGLION CELLS IN THE HINDGUT; OFTEN RESULTING IN INTESTINAL OBSTRUCTION.
-1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-PETIPHERAL Blood lymphocytes;
MEDLINE-98367034; PubMed-9700200;
Doray B., Salomon R., Amiel J., Pelet A., Touraine R., Billaud M.,
Attie T., Bachy B., Munnich A., Lyonnet S.;
"Mutation of the RET ligand, neurturin, supports multigenic
inheritance in Hischaprung disease.";
Hum. Mol. Genet. 7:1449-1452(1998).
-!- FUNCTION: SUPPORTS THE SUVIVAL OF SYMPATHETIC NEURONS IN CULTURE.
MAY REGULATE THE DEVELOPMENT AND MAINTENBANCE OF THE CNS. MIGHT
CONTROL THE SIZE OF NON-NEURONAL CELL POPULATION SUCH AS
                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDLINE-97100947; PubMed-8945474;
KOTADauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
"Neurturin, a relative of glial-cell-line-derived neurotrophic
                                                                                                    Score 433; DB 1; Length 156;
                                                                                                                           13; Indels
                                                       BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
9631941CC69B00B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blum H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                            5.4e-42;
                                                                                             81.9%; Score . 5.4e-w. 80.2%; Pred. No. 5.4e-w. 6; Mismatches
                                                                                                                                                                                                                                                                                                 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                     PERSEPHIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                             197 AA
             POTENTIAL.
                                                                               17063 MW;
                                                                                                               Best Local Similarity 80.2
Matches 77; Conservative
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                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HAEMOPOIETIC CELLS.
                      156
124
152
153
Growth factor; Signal SIGNAL 1 2
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                      Neurturin precursor.
                                                                            156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARIANT HSCR SER-96
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TISSUE-Melanoma;
                     22
66
93
97
123
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Q99748;
                                 DISULFID
                                                       DISULFID
                                                                               SEQUENCE
                                                                                                    Query Match
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                        CHAIN
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                          GO; GO:000165; P:MAPKKK cascade; TAS.
GO; GO:0007399; P:neurogeneels; TAS.
GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; TAS.
InterPro; IPR001839; TGF.
Pfam; PF00019; TGF-bets; 1.
SMART; SMO204; TGFB; 1.
PROSITE; PS00250; TGF BETA_1; FALSE_NEG.
Growth factor; Signal; Disease mutation; Hirschsprung disease;
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-!- FUNCTION: SUPPORTS THE SURVIVAL OF SYMPATHETIC NEURONS IN CULTURE.
MAY REGULATE THE DEVELOPMENT AND MAINTENANCE OF THE CNS. MIGHT CONTROL THE SIZE OF NON-NEURONAL CELL POPULATION SUCH AS
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NEURTURIN.

BY SIMILARITY.

A -> S (IN HSCR; ASSOCIATED TO A RET MUTATION; INCOMPLETE PENETRANCE;

dbSNP:1801281).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A., AND SEQUENCE OF 96-110; 127-135; 155-177 AND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 197;
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91AFAC8C3F8971FD CRC64;
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49.0%; Pred. No. 9.5e-18;
ive 12; Mismatches 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECAC 196
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01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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to the EMBL/GenBank/DDBJ databases

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Submitted (OCT-1995)
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                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                       100 PCGLRELEVRYSELGLGYTSDETVLFRYCAGACEAAIRI-YDLGLRRLRQRRRVRRERAR 158
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
NCBL_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-ICR; TISSUE-Dorsal root ganglion;
MEDLINE-95379105; PubMed-7650763;
Watabe K., Fukuda T., Tanaka J., Honda H., Toyohara K., Sakai O.;
Spontaneously immortalized adult mouse Schwann cells secrete
autocrine and paracrine growth-promoting activities.";
J. Neurosci. Res. 41:279-290(1995).
       -1- SUBCELLULAR LOCATION: Secreted.
-1- TISSUE SPECIFICITY: WIDESPREAD DISTRIBUTION.
-1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
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                                                                                                                                                                                                                                                                                                                                                    Length 195;
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ABE21BB35D417448 CRC64;
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P48540; 009058; P70446; P97919; P97920;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Glial cell line-derived neurotrophic factor precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hellmich H., Kos L., Cho E.S., Mahon K.A., Zimmer A.;
                                                                                                                                                                                                                                                                                                                                                  .5; DB 1;
2e-17;
ches 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           159 AHPCCRPTAYEDEVSFLDVHSRYHTLQELSARECAC 194
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING. STRAIN-C57BL/10J; TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 49.0%; Pred. No. 2e-17
Matches 47; Conservative 11; Mismatches
                                                                                                                                                                                                                                                                             BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                         BY SIMILARITY. NEURTURIN.
SUBUNIT: Homodimer; disulfide-linked.
                                                                                                                                                                      MGD; MGI:108417; Nrtn.
InterPro; IPR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SMART; SM00204; TGF9; 1.
PROSITE; PS00250; TGF_BETA_1; FALSE_NBG.
                                                                                                                                                                                                                                                      95 BY
195 NE
163 BY
192 BY
194 BY
162 IN
                                                                                                                                                EMBL; U78109; AAC52954.1; -. HSSP; Q07731; 1AGQ.
                                                                                                                                                                                                                                  Growth factor; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (Mouse)
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132
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195 AA;
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GLIAL CELL LINE-DERIVED NEUROTROPHIC
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BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
               MGD; MGI:107430; Gdnf.
GO:0007421; P:perispheral nervous system development; IMP.
GO:0000432; P:peristalsis; IMP.
InterPro; IPR001839; TGFD.
Pfam: PF00019; TGF-bera; 1.
PROSITE; PS00250; TGFB: 1.
PROSITE; PS00250; TGFB: 1.
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PROSITE; PS00250; TGFB; 1.
STGWTh factor; Glycoprotein; Signal; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34; Indels
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/FTId-VSP_006421.
B6731C767A3A95B7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Score 173; DB 1;
; Pred. No. 1.8e-12;
15; Mismatches 34;
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EMBL; U66195; AAB07463.1; ALT_INIT.
EMBL; U75532; AAB18343.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL, U36449; AAB52953.1; --
EMBL, D88264; BAA13566.1; ALT_INIT.
EMBL, D88352; BAB12221.1; --
EMBL, D88351; BAB12221.1; JOINED.
PIR, 149686; I49686
HSSP, Q07731; 1AGQ.
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Best Local Similarity 41.59
Watches 39; Conservative
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SEQUENCE FROM N.A.
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GLIAL CELL LINE-DERIVED NEUROTROPHIC

211

PROPEP CHAIN

SIGNAL

DISULFID

Growth factor; Glycoprotein; Signal; Alternative splicing;

3D-structure,

POTENTIAL.

FALSE\_NEG

EMBL; S75585; AAB33892.1; -EMBL; X92495; CAA62237.1; -ENR; A37499, A37499,
PDB; LAGG; O5-JUN-97.
InterPro; IPR001839; TGF.Deta; I.
SMART; SM00204; TGF.Deta; I.
PROSITE; PS00250; TGF\_LBETA\_1; F?

GKRLLEAPAEDHSLGHRRVPFALTSDS -> A (1n

N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . .)

INTERCHAIN

179 208 210 178 126 162 51

CARBOHYD CARBOHYD DISULFID DISULFID

VARSPLIC

isoform 2).
/FId=vSP\_006422.
F -> S (IN REF. 2).
E -> K (IN REF. 2).
E -> D (IN REF. 1; AA SEQUENCE).

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"CDNA sequence and differential mRNA regulation of two forms of glial cell line-derived neurotrophic factor in Schwann cells and rat
                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDINE-55172201; PubMed-7867768;
Schaar D.G., Steber B.A., Sherwood A.C., Dean D., Mendoza G.,
Ramakrishnan L., Dreyfus C.F., Black I.B.;
"Multiple astrocyte transcripts encode nigral trophic factors in rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97331316; PubMed=9187648; Eigenbrot C., Gerber C.; Eigenbrot C.; Gerber C.; Eigenbrot C.; Estenbrot C.; Es
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 1-50 FROM N.A., AND ALTERNATIVE SPLICING.
SYSTAIN-WHATAT: TISSUB-Kidney;
MEDLINE-95210610; Pubmed-7696586;
Suter-Crazzolara C., Unsicker K.;
"GDNF is expressed in two forms in many tissues outside the CNS.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Springer J.E., Seeburger J.L., He J., Gabrea A., Blankenhorn E.P.,
                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (ISOFORM 1), AND SEQUENCE OF 78-102.
MEDLINE-29262463. Pubmed-8493557.
Lin L.-F.H., Doherty D.H., Lile J.D., Bektesh S., Collins F.,
"GDNF: a gilal cell line-derived neurotrophic factor for midbrain
                                                     007731; 063214; 064062; 064063; 01-FEB-1995 (Rel. 31, Created) 01-FEB-1995 (Rel. 31, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update) 61-611 line-derived neurotrophic factor precursor.
                               211 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
MEDLINE-95203379; Pubmed-7895811;
                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exp. Neurol. 130:387-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NeuroReport 5:2486-2488(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Exp. Neurol. 131:47-52(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dopaminergic neurons.";
Science 260:1130-1132(1993).
                               STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            skeletal muscle.";
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                               GDNF_RAT
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MEDLINE-93262463; PubMed-8493557;
Lin L.-F.H., Doherty D.H., Lile J.D., Bektesh S., Collins F.;
"GDNF: a glial cell line-derived neurotrophic factor for midbrain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
*Subtryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P39905; Q9UD33; Q9UP97;
01-FEB-1995 (Rel. 31, Last sequence update)
01-FEB-1995 (Rel. 31, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Glial cell line-derived neurotrophic factor precursor (Astrocyte-
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                                                                                                                                                                                                                                                                                                                                                                                                            Length 211;
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 32.5%; Score 172; DB 1; Length 21 Best Local Similarity 41.5%; Pred. No. 2.4e-12; Matches 39; Conservative 15; Mismatches 34; Indels
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Science 260:1130-1132(1993).
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211 AA;
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EMBL; L15305; AAA67909.1; -. EMBL; S75583; AAB33891.1; -.

Event-Alternative splicing; Named isoforms-2; Name-1; Synonyms-GDNF633; Isoid-Q07731-1; Sequence-Displayed; Name-2; Synonyms-GDNF555; Isoid-Q07731-2; Sequence-VSP\_006422; SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.

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WWW-"http://www.rndsystems.com/asp/g_sitebuilder.asp?bodyId=201".
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    SOLUTION OF THE STATE ST
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MEDILER-98023959; PubMed-9359036;
HOfstra R.M.W., Osinga J., Buys C.H.C.M.;
"Mutations in Hirschsprung disease: when does a mutation contribute to
                                                                                                                                                                                                                                                   Baecker P.A., Lee W.H., Verity A.N., Eglen R.M., Johnson R.M.; "Characterization of a promoter for the human glial cell line-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISEASE: IN ASSOCIATION WITH MUTATIONS OF RET GENE, MAY BE INVOLVED IN HIRSCHESPRONG'S DISEASE (HSCR). THIS GENETIC DISORDER OF NEURAL CREST DEVELOPMENT IS CHARACTERIZED BY THE ABSENCE OF INTRAMORAL GANGLION CELLS IN THE HINDGUT; OFTEN RESULFING IN INTESTINAL OBSTRUCTION.
SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY. BATABASE: NAME-RED Systems' cytokine mini-reviews: GDNF;
                       SEGUENCE FROM N.A. (ISOFORM 2).
MEDIJUE-95172201; PubMed-7867768;
Schaar D.G., Sieber B.A., Errwood A.C., Dean D., Mendoza G.,
Ramakrishhan L., Dreyfus C.F., Black I.B.;
"Multiple astrocyte transcripts encode nigral trophic factors in rat
                                                                                                                                                                                                                                                                                                                                                                                                                                      "Glial cell line-derived neurotrophic factor: selective reduction of
the intermolecular disulfide linkage and characterization of its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-97051933; PubMed-8896568; Angrist M., Bolk S., Halushka M., Lapchak P.A., Chakravarti A.; Germline mutations in glial cell line-derived neurotrophic factor (GNMF) and RET in a Hirschsprung disease patient. "; Nat. Genet. 14:341-344(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ivanchuk S.M., Myers S.M., Eng C., Mulligan L.M.;
"De novo mutation of GDNF, ligand for the RET/GDNFR-alpha receptor complex, in Hirschsprung disease.";
Hum. Mol. Genet. 5:2023-2026(1996).
                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-97141760; PubMed-8988018;
Haniu M., Hui J., Young Y., Le J., Katta V., Lee R., Shimamoto G.,
Rohde M.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-97051934; PubMed-8896569; Salomon R., Attie T., Pelet A., Bidaud C., Eng C., Amiel J., Sarnacki S., Goulet O., Ricour C., Nihoul-Fekete C., Munnich A.,
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                                                                                                                                                                                                                                                                                            neurotrophic factor gene.";
Brain Res. Mol. Brain Res. 69:209-222(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IsoId-P39905-2; Sequence-VSP_006420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IsoId-P39905-1; Sequence-Displayed;
                                                                                                                                                                                         SEQUENCE OF 1-187 FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                      PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE-97141760; PubMed-8988018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Hum. Genet. 5:180-185(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Secreted. ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                              TISSUE-Kidney;
MEDLINE-99296655; PubMed-10366742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blochemistry 35:16799-16805(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT HSCR SER-154.
MEDLINE-97123511; PubMed-8968758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANTS HSCR SER-21 AND ASN-150.
                                                                                                                                                Exp. Neurol, 130:387-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disulfide structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT HSCR TRP-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the phenotype.
Eur. J. Hum. G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Name=2
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                                                                                                                            and
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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R -> W (IN HSCR; ASSOCIATED TO A RET
MUTATION; COULD BE AN EXTREMELY RARE
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GLIAL CELL LINE-DERIVED NEUROTROPHIC PACTOR.
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N-LINKED (GLCNAC. . .) (POTENTIAL).
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T -> S (IN HSCR; SPORADIC FORM).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31.9%; Score 169; DB 1; Length 211; larity 41.5%; Pred. No. 5.2e-12; Conservative 15; Mismatches 34; Indels
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/FIId-VSP_006420.
P -> S (IN HSCR; COULD BE A
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D -> N (IN HSCR; COULD BE
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sparus

998ub3 salvelinus, 998ub3 salvelinus, 990w17 salmo salar 990w17 salmo salar 990w17 salmo salar 990w24 oncorhynchu 99ddi8 salmo salar 998w05 sparus aura 990w05 sparus aura 990w6 morone amer 990w6 morone amer 990w6 coryzinus ca 99dgi cyprinus ca 99dgi cyprinus ca 99dgi brachydanio 990w06 umbrina cir 990w6 umbrina cir 990w10 ictalurus p 990w10 ictalurus p 99dgi cyprinus ca 98jgo brachydanio 99w14 drosophila 99tsy2 sus scrofa 99tsy2 sus scrofa 99pw1 gallus gall 99mw16 bascaca fasc

OM protein

Run on:

Sequence:

Minimum DB Maximum DB

Database

Result

Searched:

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PSOTENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-Testis;
X MEDLINE-21085660; PubMed-11217851;
X KRAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
X Kwai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
X Kwai J., Shinagawa A., Shibata K., Yono H., Adachi J., Fukuda S.,
A Arakawa T., Hara A., Pikunishi Y., Konoo H., Rondo S., Yamanaka I.,
X Salto T., Okazaki Y., Golobori T., Bono H., Kasukawa T., Salto R.,
X Adota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
R Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
R Kuchi P., Levis S., Matsuo Y., Nikaido I., Fesole G., Quackenbush J.,
R Kuchi P., Levis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
R Kuchi P., Levis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
R Kuchi P., Katubii F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido I., Furuno M., Aono H., Baldarelli R., Barsh G.,
R Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Neurotrophic factor artemin precursor (Adult MalE testis CDNA, RIKEN FULL-length enriched LIBRARY, clone:4930445K15, FULL INSERT sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Artemin, a novel member of the GDNF ligand family, supports peripheral and central neurons and signals through the GFRalpha3-RET receptor complex.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H., Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
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Q8QG53
Q98TB3
Q98UB3
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Q95J86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neuron 21:1291-1302(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
  NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Milbrandt J.;
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097685 macaca mula
08m177 alluropoda
090432 homo sapien
096444 homo sapien
084am2 gallus gall
094am3 gallus gall
094am3 gallus gall
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96030 homo sapien
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09jmc0 rattus norv
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(without alignments)
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                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

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SEQUENCE FROM N.A.
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Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchlonni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch R.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wynshaw Boris A., Yoshida K., Hasegawa Y., Rawaji H., Rohtsuki S., Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Artemin, a novel member of the GDNF ligand family, supports peripheral and central neurons and signals through the GFRalpha3-RET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE-99098192; PubMed-9883723;
Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
Salburger K.S., Leltner M.L., Araki T., Johnson E.M. Jr.,
Milbrandt J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 44.1%; Score 233.5; DB 11; Length 224; Local Similarity 48.5%; Pred. No. 3.1e-18; es 48; Conservative 15; Mismatches 27; Indels 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NEUROTROPHIC FACTOR ARTEMIN.
3328FB794581DF0B CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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Last annotation update)
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                                                                                                                                                                                                                                                   STRAIN-C57BL/6J; TISSUE-Oviduct; MEDLINE-22354683; PubMed-12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                224 AA; 23726 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neuron 21:1291-1302(1998)
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                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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Matches
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MEDLINE=99098192; PubMed=9883723;
Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
Milbrandt J.;
"Artemin, a novel member of the GDNF ligand family, supports
peripheral and central neurons and signals through the GFRalpha3-RET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
MEDINE-20050601; PubMed-10583383;
Masure S., Geerts H., Cik M., Hoefnagel E., Van Den Kieboom G.,
Tuytelaars A., Harris S., Lesage A.S., Leysen J.E., van der Helm L.,
Verhasselt P., Yon J., Gordon R.D.;
"Enovin, a member of the glial cell-line-derived neurotrophic factor
(GDNF) family with growth promoting activity on neuronal cells.
Existence and tissue-specific expression of different splice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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48.5%; Pred. No. 2.6e-17;
Live 13; Mismatches 29; Indels 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       / Match 42.6%; Score 225.5; DB 4; Length 220; Local Similarity 48.5%; Pred. No. 2.4e-17; nes 48; Conservative 13; Mismatches 29; Indels 9;
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Last annotation update)
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-1. SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AF115765; AAD13109.1; -.
EMBL; AF103401; AAC98690.1; -.
EMBL; AA720274; AAD21075.1; -.
EMBL; AA73628; CAB52396.1; -.
HSSP; Q07731; 1AGQ.
InterPro; IPRO11839; TGFb.
Pfam; PF00019; TGF-Beta; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor complex.";
Neuron 21:1291-1302(1998).
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AF115765; AAD13110.1; -.
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Genew; HGNC: 727; ARTN.
InterPro; IPR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SMART; SM00204; TGFB: 1.
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Best Local Similarity 48.5%
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SEQUENCE FROM N.A.
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01-MAY-2000 (
01-MAR-2003 (
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                                                                                                                                                                                                                                                                                                                                                                                           3 SGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQG-----
                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
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Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.2%; Score 175.5; DB 11; Length 161; 50.6%; Pred. No. 6.8e-12; tive 9; Mismatches 20; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 AA; 18337 MW; E7ACECAB302A93A7 CRC64;
                                                        199 PVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         097685
097685;
01-MAY-1999 (TFEMBLrel. 10, Created)
01-MAY-1999 (TFEMBLrel. 10, Last sequence update)
01-MAX-1999 (TFEMBLrel. 23, Last annotation update)
Neurotrophic factor (Fragment).
                                   58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                             161 AA
                                                                                                                                                                                                 Created)
                                                                                                                                                             PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41; Conservative
                                                                                                                                                             PRELIMINARY;
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1D 099
DT 011
DT 010
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                                                                                                                                                                                                                                     6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR----AHGG 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neurotrophic factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ailuropoda melanoleuca (Giant panda).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Ursidae, Ailuropoda.
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(Cioning and expression of glial cell line-derived neurotro (CioNF) of the Giant Panda (Ailuropoda melanoleuca).";

Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.

Submitted (MAY-2002) to THE TGF-BETA FAMILY.

EMBL; AF516767; AAM64208.1;

InterPro; IPR001839; TGFD.

R InterPro; IPR001839; TGFD.

R PRINTS; PR00418; TGF-Deta; 1.

R PRINTS; PR00419; TGF-Deta; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 143;
                                                                                                                                                      Length 160;
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                                                                                                                                                                                               33; Indels
                                                                                                         E206362185D499B4 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Neurotrophic factor precursor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
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NEUROTROPHIC FACTOR.
                                                                                                                                                  33.1%; Score 175; DB 6;
42.6%; Pred. No. 7.7e-12;
tive 15; Mismatches 33.
                                                                                                                                                                                                                                                                                                                                                    109 ACCRPIAYDDDLSFLDDNLVYHILRKHSAKRCGC 142
                                                                                                                                                                                                                                                                                                                           94
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                                                                                                                                                                                                                                                                                                                         62 PCCRPTRY-TDVAFLDDRHRWQRLPQLSAAACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143 AA.
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143 143 NE
143 AA; 16104 MW;
                                                                                     NON_TER 1 1
SEQUENCE 160 AA; 18196 MW;
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InterPro; IPR001839; TGFb. Pfam; PF00019; TGF-beta; 1. PRINTS; PR00438; GFCYSKNOT. SMART; SM00204; TGFB; 1.
                                                                                                                                             Query Match
Best Local Similarity 42.68
Matches 40; Conservative
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                         40 CVLTAIHLINVTDLGLGYETKEELIFRYCSGSCD-AAETTYDKILKNLSRNRRLVSDKVGQ 98
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                                                                                                                                                                                                                                                                                                                                                                                         6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR----AHGG 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                Schaar D.G., Sieber B.A., Sherwood A.C., Dean D., Mendoza G., Ramakrishnan L., Dreyfus C.F., Black I.B.;
"Multiple astrocyte transcripts encode nigral trophic factors in rat and human.";
Exp. Neurol. 130:387-393(1994).
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
InterPro, 1PR001400; GF_Cysknot.
InterPro, 1PR001839; TGFb.
                                                                                                                                                                                                                                                                                                                                                             Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang B., Feng Z., Zhou Y., Peng X., Yuan J., Olang B.; Zhang B., Feng Z., Zhou Y., Peng X., Yuan J., Olang B.; Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
-! SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AY052832; AAL11017.1; -
Interpro; IPR01839; TGFB.
Fram: PF000199, TGF-beta; 1.
SMART; SM00204; TGFB; 1.
SEQUENCE 185 AA; 20885 MW; 1988CS0DA5EA1B10 CRC64;
                                                                                                                                                                                                                                                                                                133 AA; 14736 MW; B46B96DD5F679769 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Glial cell-derived neurotrophic factor isoform.
                                                                                                                                                                                                                                                                                                                                                           34;
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                                                                                                                                                                                                                                                                                                                              31.9%; Score 169; DB 4, 41.5%; Pred. No. 3e-11;
                                                                                                                                                                                                                                                                                                                                            Local Similarity 41.5%; Pred. No. 3e-11 es 39; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185 AA.
ASTROCYTE-derived TROPHIC factor 2, ATF-2.
                                                                                                     MEDLINE-95172201; PubMed-7867768;
                                                                                                                                                                                                                                                  Pfam; PF00019; TGF-beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM00204; TGFB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                 Homo sapiens (Human)
                                                                                       SEQUENCE FROM N.A.
                                                         NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                SEQUENCE
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RESULT 9

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50 CVLTBIHLNVTDLDLGYETKEELIFRYCSGSCD-AAETTYDKILKNLTRKKKLYTDKVRQ 108
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MEDLINE-20092738; PubMed-10625540;
Homma S., Oppenheim R.W., Yaginuna H., Kimura S.;
Expression pattern of GRW. c-ret, and GFRalphas suggests novel roles for GDWF ligands during early organogenesis in the chick embryo.";
Dev. Biol. 217:121-137(2000).
-I- SIMILARIYY: BELONGS TO THE TGF-BETA FAMILY.
EMBL, ARIY6018; AAF26685.1; -.
HSSP; Q07731; 1AGQ.
InterPro; IRR001839; TGFb.
PPfam; PF00019; TGF-beta; 1.
                                                                                                                                                                                                                                                                                                                          Zheng H., Fang S., Xi Y., Fujihara N.; "Cloning and expression of glial cell line-derived neurotrophic factor canner of Niesonia nieson.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGG----
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                         Nipponia nippon.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Archosauria; Aves; Neognathae; Ciconiiformes; Threskiornithidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 143;
                                           01-JUN-2002 (TIEMBLrel. 21, Created)
01-JUN-2002 (TIEMBLrel. 21, Last sequence update)
01-JUN-2003 (TIEMBLrel. 23, Last annotation update)
01-MAR-2003 (TIEMBLREL. 23, Last annotation update)
01-MAR-2001 (Inne-derived neurotrophic factor GDNF (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                        (GDNF) of Nipponia nippon.";
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; RA469665; AAL79041.1; -.
INTERPIC; IPR002400; GF_CYSKNOCT.
InterPIC; IPR001839; TGFb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Glial cell line-derived neurotrophic factor short form
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.9%; Score 158; DB 13; 39.4%; Pred. No. 5.5e-10; iive 16; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109 ACCRPTAFDDDLSFLDDNLVYHILKKHSAKRGG 142
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143 AA
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01-0CT-2000 (TrEMBLrel. 15, Last seq
01-MAR-2003 (TrEMBLrel. 23, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00019; TGF-beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM00204; TGFB; 1.
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Matches 37; Conservative
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PRELIMINARY;
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Gallus gallus (Chicken)
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                                                                                                                                                                                                                                    Nipponia.
NCBI_TaxID=128390;
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG
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                              Sequence 7
Sequence 8
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Sequence 1
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APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: ROTZBAUER, PAUL T
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LEIN, ROBERT
APPLICANT: DESAUVACE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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ZIP: 63105
ZIP: 63105
ZOMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
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                           100.0%; Score 529; DB 3;
100.0%; Pred. No. 3.2e-59;
1ve 0; Mismatches 0;
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                                                                                                                                                                                                                                                                             US-09-220-528-41
                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 211, Application US/08931858E Patent No. 6222022 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/COCKET NUMBER: 971486
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.
Best Local Similarity 100.
Matches 96; Conservative
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LENGTH: 96 amino acids
TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: peptide
FILING DATE:
CLASSIFICATION: 435
 STRANDEDNESS
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Sequence 15, Appl
Sequence 132, App
Sequence 217, App
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223, App
18, App
80, App
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80, App
81, App
81, App
111, App
                                                                                                           4; Search time 29 Seconds (without alignments) 140.064 Million cell updates/sec
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Sequence 198,
Sequence 196,
Sequence 136,
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Sequence 1
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/cgn2_6/ptodata/1/laa/5B_COMB.pep:*
/cgn2_6/ptodata/1/laa/6A_COMB.pep:*
/cgn2_6/ptodata/1/laa/6B_COMB.pep:*
/cgn2_6/ptodata/1/laa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/1/laa/pcTUS_COMB.pep:*
               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-931-858E-135
US-08-931-858E-132
US-08-931-858E-223
US-08-931-858E-223
US-08-931-858E-80
US-08-931-858E-187
US-08-931-858E-187
US-08-931-739-80
US-08-931-739-81
US-08-931-858E-111
US-08-931-858E-111
US-08-931-858E-198
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US-08-981-739-83
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                             2003, 22:21:04
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Listing first 45 summaries
                                                                                - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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529
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Match 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                  US-08-931-858E-132
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                        1 ALSGPCOLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLOGOGRAHG 60
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor FILE REFERENCE: 6029-7998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 529; DB 3; Length 96; Best Local Similarity 100.0%; Pred. No. 3.2e-59; Matches 96; Conservative 0; Mismatches 0; Indels
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                              61 GPCCRPTRYIDVAFILDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 96
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                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/220,528A CURRENT FILING DATE: 1998-12-24 EARLIER APPLICATION NUMBER: 09/218,698 EARLIER FILING DATE: 1998-12-22 EARLIER APPLICATION NUMBER: 60/108,148 EARLIER FILING DATE: 1998-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/931,858E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 120
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                                                                                                                                                                                                                 Sequence 15, Application US/09220528A Patent No. 6284540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: KOTZBAUER, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 15
LENGTH: 96
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo sapiens
US-09-220-528-15
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CITY: ST. LOUIS
STATE: MO
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38 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLOGOGRAHG 97
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APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: ROTIBANDT, JEFFREY D
APPLICANT: LAMPE, PAUL T
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LAMPE, PRED
APPLICANT: DESAUVAGE, FRED
APPLICANT: DESEMPTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
100.0%; Score 529; DB 3;
Best Local Similarity 100.0%; Pred. No. 4.8e-59;
Matches 96; Conservative 0; Mismatches 0;
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ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                        ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REPERENCE/DOCKET NUMBER: 971486
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
TELEPHONE: 314-727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 217, Application US/08931858E
; Patent No. 6222022
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NAME: HOLLAND, DONALD R.
REGIGSTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 9714
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 132: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                   LENGTH: 133 amino acids
TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 156 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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CLASSIFICATION: 435
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SOFTWARE: Patentin Ver. 2.0
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Best Local Similarity 100.
Matches 89; Conservative
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                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-18
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                                  US-09-220-528-18
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STATE: MC
COUNTRY:
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                                                 Length 156;
                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCES: ADDRESS:
ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: WO
COUNTRY: USA
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DAFR:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                       Query Match
100.0%; Score 529; DB 3;
Best Local Similarity 100.0%; Pred. No. 5.8e-59;
Matches 96; Conservative 0; Mismatches 0;
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Mismatches 0;
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100.0%; Pre
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INFORMATION FOR SEQ ID NO: 223:
SEQUENCE CHARACTERISTICS:
LENGTH: 89 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                   APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY
APPLICANT: KOTZBAUER, PAUL T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 97
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35,197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,7
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 peptide
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MOLECULE TYPE: peptide
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Best Local Similarity
Matches 89; Conserv
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APPLICANT: JOHNSOI
; MOLECULE TYPE:
US-08-931-858E-217
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                                             GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Biloh, Robert H.
TITLE OF INVENTION: Attemin, A No. 6284540el Neurotrophic Factor FILE REFERENCE: 6029-7998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBANDT, JEFFREY D
APPLICANT: MAIDANDT, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.0%; Score 492; DB 3;
100.0%; Pred. No. 1.3e-54;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
STATE: MO
                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/220,528A
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/218,698
EARLIER FILING DATE: 1998-12-22
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 120
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Sequence 18, Application US/09220528A Patent No. 6284540
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BEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 80, Application US/08931858E
Patent No. 6222022
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NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 97.
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
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                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS NUMBER OF SEQUENCES: 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83.0%; Score 439; DB 3; Length 96; 81.2%; pred. No. 6.9e-48; tive 8; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC feature COMPUTER: IBM PC feature COMPUTER: IBM PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, Version #1.30
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STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
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                                                                                                  61 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 96
                                                                               61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRILOW AFFLICATION DATA:
APPLICATION NUMBER: PCT/US97/03461
FILING DATE: «CURKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/981,739
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-08-981-739-80
                                                                                                                                                                                                                    Sequence 80, Application US/08981739
Patent No. 6222449
GENERAL INFORMATION:
APPLICANT: JOHNSON JR., EUGENE M.
                                                                                                                                                                                                                                                                                                    MILBRANDT, JEFFREY D. KOTZBAUER, PAUL T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (314) 727-5188
TELEFAX: (314) 727-6092
INFORMATION FOR SEQ ID NO: 80:
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CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 80, Application US/09128026; Patent No. 6403335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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Best Local Similarity 81.29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
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STATE: MISSOURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: US
ZIP: 63105-1817
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                                                                                                                                                                                                                                                                                                                             1 ALAGSCRIMSLTLPVAELGLGYASEEKVIFRYCAGSCPQEARTQHSLVLARLRGRGRAHG 60
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                                                                                                                                                                                                                          Length 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: LAMPE, PATRICIA A
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURREW APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                                                                                                                  10;
                                                                                                                                                                                                                                                                                                                                                                                    61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                           61 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 439; DB 3;
Pred. No. 6.9e-48;
8; Mismatches 10.
                                                                                                                                                                                                                        Query Match 83.0%; Score 439; DB 3; Best Local Similarity 81.2%; Pred. No. 6.9e-48; Matches 78; Conservative 8; Mismatches 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 187, Application US/08931858E Patent No. 6222022 GENERAL INFORMATION:
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ATTORREY/AGENT INFORMATION:
RAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/POCKET NUMBER: 9714
TELEPHONE: 314-727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY
APPLICANT: KOTZBAUER, PAUL T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83.0%;
81.2%;
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      314-727-5188
                       TELEFAX: 314-727-6092
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
TYPE: amino acids
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                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
The 78; Conserv?
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                                                                                                                                                 TOPOLOGY: linear
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                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
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                                                                                                                                                                                    US-08-931-858E-80
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STATE: M
COUNTRY:
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGQGRAHG 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: JOHNSON JR., EUGENE M.
APPLICANT: MIEBRANDI, JEFEREY D.
APPLICANT: KOTZBAUER, PAUL T.
APPLICANT: LAMPE, PATRICIA A.
TITLE OF INVENTION: DESERBEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
                 SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/128,026
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ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7/33 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MISSOURI
COUNTY: OS.
ZIF: 63105-1817
COMPUTER READABLE FORM:
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPATIBLE SYSTEM: PC-DOS/MS-DOS
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                                                                                                                        CLASSIFICATION: CURRENCE PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US97/03461
FILING DATE: CURROWN>
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.,
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-6092
INFORMATION FOR SEQ ID NO: 81:
SEQUENCE CRARACTERISTICS:
                                                                    APPLICATION NUMBER: US/08/981,739
FILING DATE: 31-Aug-1998
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TOPOLOGY: linear; MOLECULE TYPE: protein; SEQUENCE DESCRIPTION: SEQ ID NO: 81: US-08-981-739-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 81, Application US/09128026 Patent No. 6403335
                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 134 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: <Unknown>
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NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 9761
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (314) 727-51
TELEFAX: (314) 727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
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US-09-128-026-81
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KOYZBAUBR, PAUL T.

LAMPE, PATRICIA A.

TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
KOMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
STREET: 7733 FORSYTH BOULEVARD, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 439; DB 4; Length 96;
Pred. No. 6.9e-48;
8; Mismatches 10; Indels
                                       APPLICANT: MILBRANDT, JEFFREY D.
APPLICANT: KOTZBAUER, PAUL T.
APPLICANT: LAMPE, PATRICIA A.
ATTLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
COMPUTER: Ploppy disk
COMPUTER: The PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
APPLICATION NUMBER: US/09/128,026
FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-6188
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 81, Application US/08981739
Patent No. 622449
GENERAL INCRMATION:
APPLICANT: JOHNSON JR., EUGENE M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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LENGTH: 96 amino acids
TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match
Best Local Similarity 81.29
Matches 78; Conservative
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STATE: MISSOURI
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-128-026-80
                                                                                                                                                                                                                                  CITY: ST. LOUIS
STATE: MISSOURI
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-981-739-81
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47 ALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEARTQHSLVLARLRGRGRAHG 106
                                                                                                                                                                                                                                    APPLICANT: JOHNSON JR., EUGENE M.
MILBRANDT, JEFFREY D.
KOTZBAUER, PAUL T.
LAMPE, PATRICIA A.
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/981,739
                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CIVITY: ST. LOUIS
STATE: MISSOUR
COUNTRY: US
ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                                              107 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 142
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                                       61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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APPLICATION NUMBER: PCT/US97/03461
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SEQUENCE DESCRIPTION: SEQ ID NO: 111:
US-08-981-739-111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
TELEFAX: (314) 727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, B.NEGISTRATION NUMBER: 35,197
                                                                                                                                                                            Sequence 111, Application US/08981739 Patent No. 6232449 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 31-Aug-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 83.0
Best Local Similarity 81.2
Matches 78; Conservative
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US-09-128-026-111
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                                                                                                                                                                                                                                                                                    39 ALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEARTQHSLVLARLRGRGRAHG 98
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                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                DB 4; Length 134;
                                                                                                                                                                    Score 439; DB 4; Demander No. 1e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                                                                                                                                                                                                               99 RPCCOPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 134
                                                                                                                                                                                                                                                                                                                                            61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E: HOWELL & HAFERKAMP, L.C. 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 83.0%; Score 439; DB Best Local Similarity 81.2%; Pred. No. 1.1e-Matches 78; Conservative 8; Mismatches
                                                                                                                                                                                                                          8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 111, Application US/08931858E Patent No. 6222022 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 97146
TELEPHONE: 314-727-5188
TELEPHONE: 314-727-6092
INFORMATION FOR SEQ ID NO: 111:
                                                                                                                                                                                Query Match 83.0%;
Best Local Similarity 81.2%;
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Floppy disk
    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 134 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     142 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein US-08-931-858E-111
                                                                                               ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-128-026-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ST. LOUIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                 STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: US
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STATE:
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
83.0%; Score 439; DB 3; Length 142;
81.2%; Pred. No. 1.1e-47;
tive 8; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 111, Application US/09128026; Patent No. 6403335
GENERAL INFORMATION: GENERAL PREPARENTS JOHNSON JR., EUGENE M.
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APPLICANT MILEARURY, JEEFREY D.
APPLICANT MILEARURY, PAUL T.
APPLICANT LAMPE. PAULT.
ANDRESSE:
ANDRESS
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Search completed: September 9, 2003, 22:26:21 Job time : 32 secs

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9, 2003, 22:22:34; Search time 29 Seconds (without alignments) 454.522 Million cell updates/sec
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2: (cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
3: (cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
4: (cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
5: (cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
6: (cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
7: (cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
8: (cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
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10: (cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
11: (cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
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13: (cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
14: (cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
15: (cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
15: (cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
16: (cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
17: (cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
18: (cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
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18: (cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 513375 seqs, 137303645 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published_Applications_AA:*
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                             OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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529
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	-	Sequence 41, Appl Sequence 18, Appl	Sequence 101, App	Sequence 34, Appl	Sequence 35, Appl	Sequence 36, Appl	Sequence 41, Appl	Sequence 2, Appl1	59,	16,	33,	Sequence 34, Appl	 E	Seguence 12, Appl
	)  -  -				•									
SUMMARIES	US-09-220-920-15	US-09-220-920-18	US-09-800-729-101	US-09-220-920-34	US-09-220-920-35	US-09-220-920-36	US-09-220-920-41	US-09-804-615-2	US-09-220-920-29	US-09-804-615-16	US-09-220-920-33	US-09-804-615-34	US-09-220-920-3	US-09-804-615-12
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a Ouery Match Length DB	96	89	. 183	113	116	144	185	200	224	224	96	224	113	113
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Score	529	492	322	233.5	233.5	233.5	233.5	233.5	233.5	233.5	231.5	227.5	225.5	225.5
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60 

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55.5 42.6 114 9 US-0 55.5 42.6 116 9 US-0 55.5 42.6 110 9 US-0 55.5 42.6 129 9 US-0 55.5 42.6 129 9 US-0 55.5 42.6 120 15 US-0 55.5 42.6 220 15 US-0 55.6 42.6 220 15 US-0 55.6 42.6 220	0.08;
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16 225.5 42.6 116 18 225.5 42.6 116 19 225.5 42.6 116 20 225.5 42.6 116 21 225.5 42.6 140 22 225.5 42.6 140 22 225.5 42.6 159 23 225.5 42.6 159 24 225.5 42.6 120 25 225.5 42.6 220 26 225.5 42.6 220 27 225.5 42.6 220 28 225.5 42.6 220 28 225.5 42.6 220 28 225.5 42.6 220 31 225.5 42.6 220 32 225.5 42.6 220 33 225.5 42.6 220 34 225.5 44.6 220 35 225.5 44.6 220 36 225.5 44.6 220 37 225.5 44.6 220 38 225.5 44.6 220 39 225.5 44.6 220 31 225.5 44.6 220 32 225.5 44.6 220 33 225.5 44.6 220 34 225.5 44.0 116 40 221.5 41.9 113 39 221.5 41.9 113 30 225.5 42.6 220 30 225.5 42.	ROH: H: PER
16 222 17 222 18 222 20 222 21 222 22 22 23 222 23 222 24 22 22 31 222 31 222 32 222 33 222 34 222 36 222 36 222 36 222 37 222 38 222 38 222 39 222 30 222 31 222 32 222 32 222 32 222 32 222 32 222 33 222 34 222 35 222 36 222 37 222 38 222 38 222 38 222 38 222 39 222 40 222 41 221 42 21 43 211 45 21 45 21 45 21 46 22 46 22 47 22 48 22	SEC ID NO LENGTH: TYPE: P ORGANIS -09-220-9 Query Mat Best Loca
RESULT APPROACH APPRO	SE : SE :

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NAME/KEY: SITE
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US-09-220-920-34
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LENGTH: 183
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
        Sequence 41, Application US/09813398
Patent No. US20020169292a1
GENERAL INFORMATION:
APPLICANT: Bruce D. Weintraub
APPLICANT: Bruce D. Weintraub
APPLICANT: University of Maryland
TILE REFERENCE: UOFMD.003C1
CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT FILING DATE: 1009-013-19
PRIOR FILING DATE: 1999-03-19
PRIOR PLING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-19
SPROR FILING DATE: 1999-03-19
SPROR FILING DATE: 1998-09-22
NUMBER OF SEQ ID NOS: 41
SEQ ID NO 41
                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 529; DB 10; Best Local Similarity 100.0%; Pred. No. 3.8e-46; Matches 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122 GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 18
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US-09-220-920-18
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09-813-398-41
-09-813-398-41
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; LOCATION: (146); COTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-800-729-101
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE ON INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor FILE REFERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT APPLICATION NUMBER: US/09/163,283
EARLIER APPLICATION NUMBER: 60/168,148
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER FILING DATE: 1998-11-12
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER APPLICATION NUMBER: 09/218,698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 PCQLWSL-----TLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 60.9%; Score 322; DB 9; Length 183; Best Local Similarity 65.7%; Pred. No. 3.8e-25; Matches 65; Conservative 2; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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                                                                                                             APPLICANT: Ni et al.
TILLE PEPERENCE: P2044P1
CURRENT APPLICATION NUMBER: US/09/800,729
CURRENT FILING DATE: 2001-03-08
PRIOR APPLICATION NUMBER: PCT/US00/26013
PRIOR APPLICATION NUMBER: 60/155,709
PRIOR PILING DATE: 2000-09-22
PRIOR FILING DATE: 1999-09-24
NUMBER PC SEQ ID NOS: 217
SOFTWARE: PATCHIN VET. 2.0
US-09-800-729-101
; Sequence 101, Application US/09800729
; Patent No. US20020068319A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 34, Application US/09220920; Patent No. US20020002269A1; GENERAL INFORMATION: APPLICANT: Milbrandt, Jeffrey D.; APPLICANT: Baloh, Robert H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 120
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens
                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: MURINE
US-09-220-920-34 .
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5;

Gaps

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6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQG-----R 57
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                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Attemin, A No. US20020002269Alel Neurotrophic Factor FILE REFERENCE: 6029-7996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1. Application US/09804615

Patent No. US202055467A1

GENERAL INFORMATION.

APPLICANT: Johansen, Teit E.

APPLICANT: Johansen, Teit E.

APPLICANT: Wen-Yee Saw, Dinah

TILE OF INVENTION: No. US20020055467A1e1 Neurotrophic Factors

FILE REFERENCE: No. US20020055467A1e1 Neurotrophic Factors

CURRENT FILING DATE: 2001-03-12

PRIOR APPLICATION NUMBER: US/09/804,615

PRIOR FILING DATE: 1998-07-06

PRIOR FILING DATE: 1998-07-06

PRIOR FILING DATE: 1998-07-09

PRIOR FILING DATE: 1998-07-03

PRIOR FILING DATE: 1998-07-03

PRIOR FILING DATE: 1998-07-03

PRIOR FILING DATE: 1998-08-19

PRIOR FILING DATE: 1998-08-25

PRIOR FILING DATE: 1998-08-25

PRIOR APPLICATION NUMBER: USSN 60/103,908

PRIOR FILING DATE: 1998-10-13

PRIOR APPLICATION NUMBER: DANISH 1998 01265
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                                Indels
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                                                                                                                                                                       58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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48.5%; Pred. No. 3.4e-16;
tive 15; Mismatches 27;
       Pred. No. 2.7e-16;
; Mismatches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
NUMBER OF SEQ ID NOS: 120
SEQ ID NO 41
                                                                                                                                                                                                                                                                                                                                   Sequence 41, Application US/09220920 Patent No. US20020002269A1 GENERAL INFORMATION:
       Similarity 48.5%; Pr 48; Conservative 15;
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Best Local Similarity 48.59
Matches 48; Conservative
    Best Local Similarity
Matches 48; Conserv
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APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Milbrandt, Jeffrey D.
TITLE OF INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor
FILE REPERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT APPLICATION NUMBER: 09/163,283
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
EARLIER FILING DATE: 1998-12-22
SEARLIER FILING DATE: 1998-12-22
SERVING APPLICATION NUMBER: 09/218,698
6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQG-----R 57
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APPLICANT: Milbrandt, Jeffrey D.

APPLICANT: Milbrandt, Jeffrey D.

APPLICANT: Baloh, Robert H.

TITLE OF INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor
TITLE OF INVENTION: Annuals: US/09/220, 920

CURRENT FILING DATE: 1998-12-24

EARLIER APPLICATION NUMBER: 09/163, 283

EARLIER FILING DATE: 1998-09-29

EARLIER APPLICATION NUMBER: 09/18, 18

EARLIER FILING DATE: 1998-11-12

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-12-22

WUMBER: OF SEQ ID NOS: 120
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es 27; Indels
                                                                                                                        58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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                                                                                             58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
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Pred. No. 2.1
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Best Local Similarity 48.5%
Matches 48; Conservative
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LENGTH: 144
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US-09-220-920-33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 29, Application US/09220920
Battent No. US200220201259A1
GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                  Length 200;
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APPLICANT: Johansen, Teit B.
APPLICANT: Wen-Yee Saw, Dinah
TITLE OF INVENTYON: NO. US20020055467Alel Neurotrophic Factors
FILE REFERENCE: No. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION UNBER: US/99/804,615
CURRENT FILING DATE: 2001-03-12
PRIOR APPLICATION NUMBER: DANISH 1998 00904
                                                                                                                                                                                                                                      Indels
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                                                                                                                                                                                            Query Match 44.1%; Score 233.5; DB 9; Best Local Similarity 49.5%; Pred. No. 3.7e-16; Matches 49; Conservative 12; Mismatches 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uery Match
44.1%; Score 233.5; DB 9
Pst Local Similarity 48.5%; Pred. No. 4.1e-16;
atches 48; Conservative 15; Mismatches 27
PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
PRIOR FILING DATE: 1999-07-02
NUMBER OF SEQ ID NOS: 40
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
NUMBER OF SEQ ID NOS: 120
SEQ ID NO 29
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Patent No. US20020055467A1
                                                                                                                                  ORGANISM: Homo sapiens
US-09-804-615-2
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US-09-220-920-29
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US-09-220-920-29
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US-09-804-615-16
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APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. US2002002269Alel Neurotrophic Factor
FILE REFERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER APPLICATION NUMBER: 09/218,698
EARLIER FILING DATE: 1998-11-2
NUMBER OF SEQ ID NOS: 120
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 33
LENGTH: 96
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; Pred. No. 2.8e-16;
15; Mismatches 26;
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PRIOR PLICATION NUMBER: USSN 60/092,229
PRIOR FILING DATE: 1998-07-09
PRIOR PLICATION NUMBER: DAMISH 1998 01048
PRIOR APPLICATION NUMBER: DAMISH 1998 01048
PRIOR FILING DATE: 1998-08-15
PRIOR PLILING DATE: 1998-08-25
PRIOR PLILING DATE: 1998-10-13
PRIOR PLILING DATE: 1998-110-13
PRIOR APPLICATION NUMBER: DANISH 1998 01265
PRIOR PLILING DATE: 1998-10-06
PRIOR PLILING DATE: 1998-07-02
NUMBER OF SEQ ID NOS: 40
SOFTWARE: PATENTIN Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 33, Application US/09220920 Patent No. US20020002269A1 GENERAL INFORMATION:
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Best Local Similarity 48.58
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 48.5
Matches 48; Conservative
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Search completed: September 9, 2003, 22:26:56
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Betent No. US20020002269A1
GENEBAL INCORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Milbrandt, Jeffrey D.
TITIE OF INVERTION: Artemin, A No. US20020002269Alel Neurotrophic Factor
FILE REFRENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER FILING DATE: 1998-11-12
HARBER OF SEQ ID NOS: 120
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                                                                                                  APPLICANT: Wen-Yee Saw, Dinah
TITLE OF INVENTION: No. US20020055467Alel Neurotrophic Factors
FILE REPERENCE: No. US20020055467Alel Neurotrophic Factors
FILE REPERENCE: No. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION NUMBER: US/09/804,615
FRIOR FILING DATE: 1200-03-12
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-25
PRIOR FILING DATE: 1998-08-25
PRIOR APPLICATION NUMBER: USSN 60/103,908
PRIOR PILING DATE: 1998-10-06
PRIOR PILING DATE: 1998-10-06
PRIOR FILING DATE: 1999-07-02
NUMBER OF SEQ ID NOS: 40
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43.0%; Score 227.5; DB 9; Length
Best Local Similarity 47.5%; Pred. No. 1.7e-15;
Matches 47; Conservative 15; Mismatches 28; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      186 PISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9;
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les 29;
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Sequence 34, Application US/09804615
Patent No. US20020055467A1
GENERAL INFORMATION:
APPLICANT: Johansen, Teit E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOTTWARE: Patentin Ver. 2.0
SEQ ID NO 3
LENGTH: 113
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: Rattus sp.
US-09-804-615-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
US-09-220-920-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: HOUS-09-320-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQG-----R
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                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Johansen, Telt E.
APPLICANT: Johansen, Telt E.
APPLICANT: Wen-Yee Saw, Dinah
TITLE OF INVENTION: NO. US20020055467Alel Neurotrophic Factors
FILE REFERRENCE: NO. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION NUMBER: US/09/804,615
CURRENT FILING DAEE: 2001-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 113;
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Best Local Similarity 48.5%; Pred. No. 1.3e-15;
Matches 48; Conservative 13; Mismatches 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: DANISH
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR PELLING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-19
PRIOR APPLICATION NUMBER: DANISH 1998 01048
PRIOR FILING DATE: 1998-08-25
PRIOR FILING DATE: 1998-08-25
PRIOR FILING DATE: 1998-10-13
PRIOR FILING DATE: 1998-10-06
SEQ ID NOS: 40
SEQ ID NO 12
LENGER: PALENTIN VINEBER: U.S.S.N 09/347,613
PRIOR FILING DATE: 1999-07-02
SOFTHARE: PALENTIN VINEBER: U.S.S.N 09/347,613
PRIOR FILING DATE: 1999-07-02
SOFTHARE: PALENTIN VINEBER: U.S.S.N 09/347,613
PRIOR FILING DATE: 1999-07-02
SOFTHARE: PALENTIN VINEBER: U.S.S.N 09/347,613
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: OTHER INFORMATION: glycosylated asparagine
US-09-804-615-12
                                                                                                                                                                                                                                                                                                                                                                  Sequence 12, Application US/09804615
Patent No. US20020055467A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
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            12 L1 (20A) ANTIBOD###
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KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L2
             12 DUPLICATE REMOVE L2 (0 DUPLICATES REMOVED)
=> d 1-12
     ANSWER 1 OF 12 USPATFULL on STN
L3
AN
       2002:213408 USPATFULL
       Methods of increasing distribution of therapeutic agents
ΤI
       Bankiewicz, Krys, Piedmont, CA, UNITED STATES
TN
       Hamilton, John, Washington, DC, UNITED STATES
       Oldfield, Edward, Philomont, VA, UNITED STATES
       Phillips, Heidi, Palo Alto, CA, UNITED STATES
PΙ
       US 2002114780
                          A1
                               20020822
                          A1
                               20011130 (9)
AΤ
       US 2001-999203
       US 2000-250286P
                           20001130 (60)
PRAI
DT
       Utility
FS
       APPLICATION
LN.CNT 942
       INCLM: 424/085.100
INCL
       INCLS: 514/056.000
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       NCLS: 514/056.000
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       ICM: A61K038-19
       ICS: A61K031-727
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 2 OF 12 USPATFULL on STN
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AN
       2002:4289 USPATFULL
       ARTEMIN, A NEUROTROPHIC FACTOR
ΤI
       MILBRANDT, JEFFREY D., ST LOUIS, MO, UNITED STATES
IN
       BALOH, ROBERT H., ST LOUIS, MO, UNITED STATES
                               20020103
PΤ
       US 2002002269
                          A1
ΑI
       US 1998-220920
                          A1
                               19981224 (9)
       Division of Ser. No. US 1998-218698, filed on 22 Dec 1998, PENDING
RLI
       Continuation-in-part of Ser. No. US 1998-163283, filed on 29 Sep 1998,
       ABANDONED
       US 1998-108148P
                           19981112 (60)
PRAI
       Utility
DT
FS
       APPLICATION
LN.CNT 2669
       INCLM: 530/351.000
INCL
       INCLS: 530/839.000; 530/324.000; 536/023.510; 514/012.000; 435/320.100;
              435/325.000; 514/044.000; 530/387.900; 530/388.240; 435/007.100;
              435/006.000
NCL
       NCLM:
              530/351.000
              530/839.000; 530/324.000; 536/023.510; 514/012.000; 435/320.100;
       NCLS:
              435/325.000; 514/044.000; 530/387.900; 530/388.240; 435/007.100;
              435/006.000
IC
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       ICM: C12Q001-68
       ICS: G01N033-53; A61K038-00; C07H021-04; A61K031-70; A01N043-04;
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L3
     ANSWER 3 OF 12 USPATFULL on STN
       2002:136782 USPATFULL
AN
ΤI
       Polynucleotides encoding persephin and related growth factors
IN
       Johnson, Jr., Eugene M., St. Louis, MO, United States
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uis, MO, United States
      Milbrandt, Jeffrey D., St.
       Kotzbauer, Paul T., Swarthmore, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PA
                          B1
                               20020611
PΙ
       US 6403335
ΑI
       US 1998-128026
                               19980731 (9)
       Division of Ser. No. US 981739, now patented, Pat. No. US 6232449
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DT
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       GRANTED
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              435/069.400
NCL
              435/252.300; 435/320.100; 435/325.000; 536/023.510
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       536/23.51; 435/69.4; 435/320.1; 435/325; 435/252.3
EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L3
     ANSWER 4 OF 12 USPATFULL on STN
       2001:147751 USPATFULL
AN
       Artemin, a novel neurotrophic factor
TI
       Milbrandt, Jeffrey D., St. Louis, MO, United States
IN
       Baloh, Robert H., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PA
PΙ
       US 6284540
                          B1
                               20010904
       US 1998-220528
                               19981224 (9)
AΙ
       Division of Ser. No. US 1998-218698, filed on 22 Dec 1998
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       US 1998-108148P
                           19981112 (60)
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       GRANTED
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              435/320.100; 435/325.000; 435/366.000; 435/368.000; 435/383.000;
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EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 5 OF 12 USPATFULL on STN
L3
AN
       2001:71683 USPATFULL
TI
       Persephin and related growth factors
       Johnson, Jr., Eugene M., St. Louis, MO, United States
IN
       Milbrandt, Jeffrey D., St. Louis, MO, United States
       Kotzbauer, Paul T., Swarthmore, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PA
PΙ
       US 6232449
                          B1
                               20010515
       WO 9733911 19970918
                               19980831 (8)
ΑI
       US 1998-981739
       WO 1997-US3461
                               19970314
                               19980831 PCT 371 date
                               19980831 PCT 102(e) date
RLI
       Continuation-in-part of Ser. No. US 1996-615944, filed on 14 Mar 1996,
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       Utility
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       Granted
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       INCLM: 530/399.000
       INCLS: 530/350.000
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 6 OF 12 USPATFULL on STN
L3
       2001:60041 USPATFULL
AN
       Persephin and related growth factors
TI
       Johnson, Eugene M., St. Louis, MO, United States
IN
       Milbrandt, Jeffrey D., St. Louis, MO, United States
       Kotzbauer, Paul T., Aston, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Klein, Robert, Palo Alto, CA, United States
       DeSauvage, Fred, Foster City, CA, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PΑ
                               20010424
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       US 6222022
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       Granted
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       NCLS: 530/350.000; 930/120.000
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EXF
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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L_3
AN
       2000018799 PCTFULL ED 20020515
TIEN
       ARTEMIN, A NOVEL NEUROTROPHIC FACTOR
       L'ARTEMINE, UN NOUVEAU FACTEUR NEUROTROPHIQUE
TIFR
       MILBRANDT, Jeffrey, D.;
IN
       BALOH, Robert, H.
PΑ
       WASHINGTON UNIVERSITY;
       MILBRANDT, Jeffrey, D.;
       BALOH, Robert, H.
       English
LA
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       WO 2000018799
                            A1 20000406
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       US 1998-09/218,698
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       ANSWER 8 OF 12
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AN
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       PERSEPHIN ARF, A PROTEIN ENCODED BY UNSPLICED PERSEPHIN MRNA
TIEN
TIFR
       LA PERSEPHINE ARF, PROTEINE CODEE PAR UN ARNM DE PERSEPHINE SANS
       EPISSURE
       JOHNSON, Eugene, M., Jr.;
IN
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MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DE SAUVAGE, Fred
       WASHINGTON UNIVERSITY;
PΑ
       GENENTECH, INC.;
       JOHNSON, Eugene, M., Jr.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DE SAUVAGE, Fred
       English
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AN
       1999049039 PCTFULL ED 20020515
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IN
       DE SAUVAGE, Frederic, J.;
       KLEIN, Robert, D.;
       PHILLIPS, Heidi, S.;
       ROSENTHAL, Arnon
       GENENTECH, INC.
PA
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       English
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       C12N005-10; C12N001-21; C07K019-00; C07K016-28; G01N033-68;
       C12Q001-42; A61K039-395
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       ANSWER 10 OF 12
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TIEN
       PERSEPHIN AND RELATED GROWTH FACTORS
TIFR
       PERSEPHINE ET FACTEURS DE CROISSANCE ASSOCIES
IN
       JOHNSON, Eugene, M.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DeSAUVAGE, Fred
       WASHINGTON UNIVERSITY;
PΑ
       JOHNSON, Eugene, M.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
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KLEIN, Robert;
       DeSAUVAGE, Fred
       English
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AN
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TIFR
       RECEPTEURS DES FACTEURS NEUROTROPHIQUES ASSOCIES AU TGF-β
IN
       MILBRANDT, Jeffrey, D.;
       JOHNSON, Eugene, M., Jr.;
       BALOH, Robert, H.
       WASHINGTON UNIVERSITY;
PA
       MILBRANDT, Jeffrey, D.;
       JOHNSON, Eugene, M., Jr.;
       BALOH, Robert, H.
       English
LA
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                   TD TG
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       PERSEPHIN AND RELATED GROWTH FACTORS
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